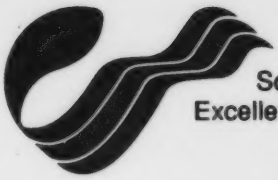

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Catch and Effort Statistics of the Canadian Groundfish Fishery on the Pacific Coast in 1988

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ABSTRACT

Rutherford, K. L. 1990. Catch and effort statistics of the Canadian groundfish fishery on the Pacific coast in 1988. Can. Tech. Rep. Fish. Aquat. Sci. 1728: 92 p.

Catch and effort statistics for the Canadian groundfish fishery (excluding halibut) on the Pacific coast in 1988 are presented. Statistics are shown by major areas, minor areas, and International North Pacific Fisheries Commission areas in metric tonnes (t). Total domestic landings in 1988 were 4% below the total for 1987. Most of the catch (83%) was taken by trawl gear. The main species landed were Pacific cod, Pacific ocean perch, Pacific hake, sablefish, dogfish, yellowtail rockfish, silvergrey rockfish, and lingcod.

Joint venture and foreign fisheries along Canada's west coast caught 89,897 t of Pacific hake in 1988.

Key words: groundfish, Pacific coast, catch statistics, effort statistics

RÉSUMÉ

Rutherford, K. L. 1990. Catch and effort statistics of the Canadian groundfish fishery on the Pacific coast in 1988. Can. Tech. Rep. Fish. Aquat. Sci. 1728: 92 p.

L'auteur présente dans le présent article les statistiques sur les prises et l'effort de pêche en ce qui concerne la pêche canadienne aux poissons de fond (en excluant le flétan) sur la côte du Pacifique en 1988. Les statistiques sont indiquées en tonnes métriques (t) par zones principales, zones secondaires et zonee de la Commission internationales des pêcheries du Pacifique nord. Le total des débarquements nationaux en 1988 s'élevait à 4 % de moins que le total de 1987. Presque toutes les prises (83 %) ont été effectuées au chalut. La morue du Pacifique, le sébaste à longue mâchoire, le merlu du Pacifique, la morue charbonnière, l'aiguillat le sébaste à queue jaune, le sébaste argenté et la morue-lingue représentaient les principales espèces débarquées.

En 1988, des entreprises mixtes et les pêches étrangères ont prélevé 89 897 tonnes de merlu du Pacifique le long de la côte ouest.

Mots clés: poissons de fond, côte du Pacifique, statistiques sur les prises, statistiques sur l'effort

INTRODUCTION

The Canadian fishery for groundfish along Canada's west coast involves many species of demersal fishes, the majority of which are caught by bottom and midwater trawls. The remaining catch is taken by trap, longline, handline, and troll. Excluding halibut, these domestic groundfish landings contributed an average of 42,513 metric tonnes (t) to the annual fish production of Canada during 1978-87. The total landings of major groundfish species, caught by all types of gear from all areas on the Pacific coast during 1978-88 are shown in Table 1.

The Biological Sciences Branch, Pacific Biological Station, Nanaimo, B.C., maintained port liaison officers at Vancouver, Steveston, and Prince Rupert during 1988. These persons conducted interviews with captains of trawl and trap vessels to collect information on effort expended for groundfish catches, by species, area and depth as well as other pertinent data. The landings not covered by these interviews were obtained from the sales slips collected by the Statistics Division of the Fisheries Branch in Vancouver. All available 1988 data are included in this report. While changes are rare, individuals using these data for analyses should refer to the author for confirmation.

Total 1988 domestic landings of 66,974 t were 58% above the 1978-87 mean and 4% below the 1987 level (Fig. 1). Pacific ocean perch and other rockfish species were the dominant species landed, accounting for 41% of the total catch. There were increases in landings of Pacific ocean perch (6,929 t), sablefish (5,770 t), dogfish (5,483 t), other rockfish species (20,399 t), rock sole (1,960 t), Dover sole (1,281 t), petrale sole (790 t), and English sole (879 t). Landings of Pacific cod (11,015 t), Pacific hake (6,054 t), lingcod (3,462 t) and pollock (1,111 t) showed decreases from 1987 catches.

In 1988, joint-venture and foreign fisheries were conducted along the British Columbia coast by Poland, the U.S.S.R., and Japan. These fisheries caught 89,897 t of Pacific hake, 29% more than the amount taken in 1987.

This portion of the document is the traditional report of landings (t) by species, by discrete domestic (minor) fishing areas and by larger United States-Canadian (major) areas, commonly called Pacific Marine Fisheries Commission (PMFC) areas.

Table 1. Total Canadian landings [a] (t) of groundfish by species, taken from all areas on the Pacific Coast, 1978-88.

Species	1978	1979	1980	1981	1982	1983	1984	1985	1986	1987	1978-87	1988
English sole	809	1,069	1,244	1,500	559	532	812	692	452	755	842	879
Rock sole	1,312	1,874	1,843	1,059	745	668	525	430	454	887	980	1,960
Petrale sole	230	202	222	290	367	439	417	336	416	445	336	790
Dover sole	736	861	1,273	1,245	914	871	1,148	963	1,167	633	981	1,281
Rex sole	102	203	145	190	74	49	219	205	87	83	136	145
Starry flounder	74	296	118	198	168	66	170	66	54	65	128	110
Turbot	2,326	1,826	1,448	946	525	323	369	764	895	1,193	1,062	375
Other flatfish	25	59	57	183	220	199	141	161	215	232	149	147
Pacific cod	6,750	9,554	8,703	6,708	4,810	4,505	3,465	2,342	3,650	13,917	6,440	11,015
Lingcod	2,004	2,098	2,151	2,467	4,162	3,755	3,688	5,668	3,827	3,591	3,341	3,462
Sablefish	831	2,031	3,793	3,888	3,976	4,414	3,855	4,275	4,668	4,719	3,645	5,770
Pollock	2,407	3,387	2,201	1,251	924	1,070	800	1,895	577	1,270	1,578	1,111
Hake	2	818	606	5,691	2,826	3,122	4,600	6,055	6,802	13,275	4,380	6,054
Ocean perch	3,864	2,819	5,290	5,103	5,983	5,655	6,698	6,069	5,914	6,335	5,373	6,929
Other rockfish	6,608	5,962	4,476	4,857	5,093	7,024	8,512	11,709	19,040	18,177	9,146	20,399
Misc. species	163	215	303	266	141	156	175	192	245	344	220	353
Dogfish	3,126	4,757	4,547	1,151	3,875	3,274	2,510	2,815	3,289	3,801	3,315	5,483
Animal food	112	214	191	42	65	94	161	309	255	188	163	130
Reduction	302	240	528	302	450	321	244	214	175	210	299	581
Total	31,783	38,485	39,139	37,337	35,877	36,537	38,509	45,160	52,182	70,120	42,513	66,974

[a] Does not include catches from joint-venture or foreign fishery, see Table 54.

Total Canadian groundfish landings
1978-1988

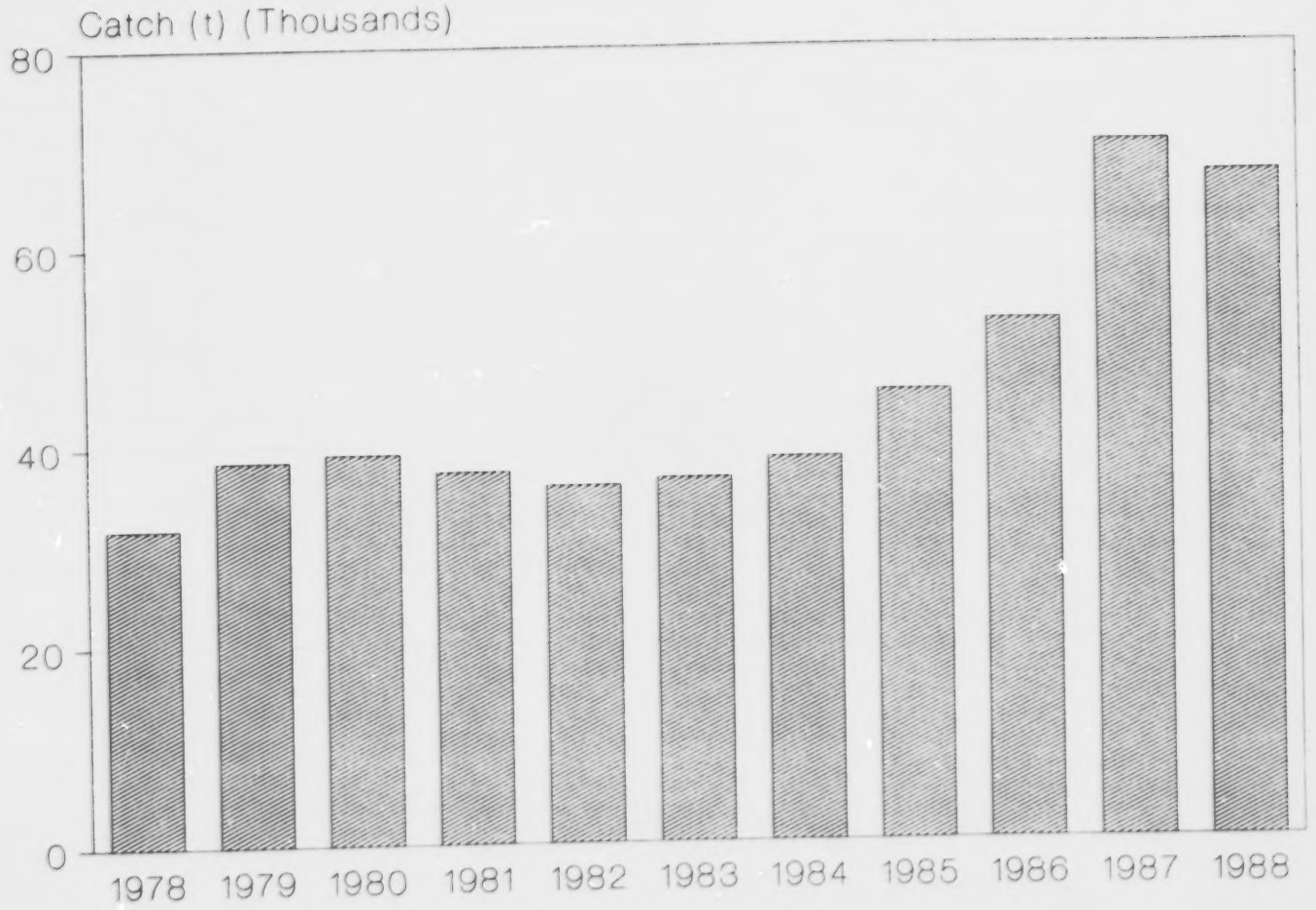


Figure 1.

MAJOR STATISTICAL AREA DIVISIONS

Standardization between Canada and the United States in reporting of groundfish catches on the Pacific coast has resulted in assignment of catches to certain major statistical areas. In the United States these international areas are used by the Pacific Marine Fisheries Commission in their annual summaries of catch statistics. Figure 2 illustrates the major statistical areas off British Columbia and gives their numerical designation. The following is a complete description of the boundaries of these areas.

AREA 3B--NORTHWEST WASHINGTON COAST

From latitude 47°20'N to a line bearing 220° True from the mid-point of the Bonilla-Tatoosh line and crossing said parallel of latitude. This area includes the Quillayute and Umatilla Reef grounds and the shallow waters off Cape Flattery.

AREA 3C--SOUTHWEST COAST VANCOUVER ISLAND

From the northern boundary of Area 3B to a line bearing 200° True from Estevan Point southward to the 49° parallel of latitude, thence westward along said parallel. This area includes the Cape Flattery Spit, the Swiftsure Bank, La Pérouse Bank (Big Bank or 40 mile Bank), the Cabbage Patch, the Firing Range, the Lennard Island and Sydney Inlet grounds, and the inshore waters of Barkley Sound.

AREA 3D--NORTHWEST COAST VANCOUVER ISLAND

From the northern boundary of Area 3C to latitude 50°30'N. This area includes the Nootka, Esperanza, and Kyuquot grounds as well as the Estevan deep ground.

AREA 4A--PUGET SOUND

The United States territorial waters inside the Bonilla-Tatoosh line including the Juan de Fuca Strait and Puget Sound. There is no Canadian catch from this area.

AREA 4B--STRAIT OF GEORGIA

The Canadian waters from the Bonilla-Tatoosh line inside to a line drawn north and south (Mag.) through Pine Island at the upper end of Queen Charlotte Strait. This area, defined simply as the Strait of Georgia, includes all Canadian inshore grounds of Juan de Fuca Strait, Johnstone and Queen Charlotte Straits, and Georgia Strait.

AREA 5A--SOUTH QUEEN CHARLOTTE SOUND

From the northern boundaries of Areas 4B and 3D to latitude 51°15'N. This area includes all grounds incorporated in the Cape Scott Bank and a portion of the grounds in the gully between the Cape Scott Bank and the Goose Island Bank. It also includes catches from the Virgin Rocks ground.

AREA 5B--NORTH QUEEN CHARLOTTE SOUND

From latitude 51°15'N to latitude 52°00'N on the westward side to Cape St. James and from latitude 51°15'N to latitude 52°10'N on the eastward side of Cape St. James. This area includes all grounds associated with the Goose Island Bank and the remaining portion of the grounds in the gully between the Goose Island Bank and the Cape Scott Bank.

AREA 5C--SOUTH HECATE STRAIT

From latitude 52°10'N to a line drawn from Spit Point (Sandspit) on Moresby Island to the southern tip of Bonilla Island. This area includes the grounds known as the "Horseshoe" and "Ole Spot" in the central region of the Strait.

AREA 5D--NORTH HECATE STRAIT

From the northern boundary of Area 5C to latitude 54°40'N, limited to the westward by longitude 133° W across Dixon Entrance. This area includes the Two Peaks ground (northeast of Rose Spit), the Butterworth-Warrior edge, the Fingers (southwest of Archibald Island), the Oval Hill ground, the White Rock ground (northwest of Bonilla Island), the Skidegate Inlet ground, the

Fife Point ground, the southwest Seal Rocks ground, and grounds in Dixon Entrance.

AREA 5E--WEST COAST QUEEN CHARLOTTE ISLANDS

From latitude 52°00'N to 54°40'N, limited to the eastward by longitude 133° W across Dixon Entrance.

AREA 6--ALASKA

Encompasses waters bounded on the south by latitude 54°40'N and on the west by longitude 147° W.

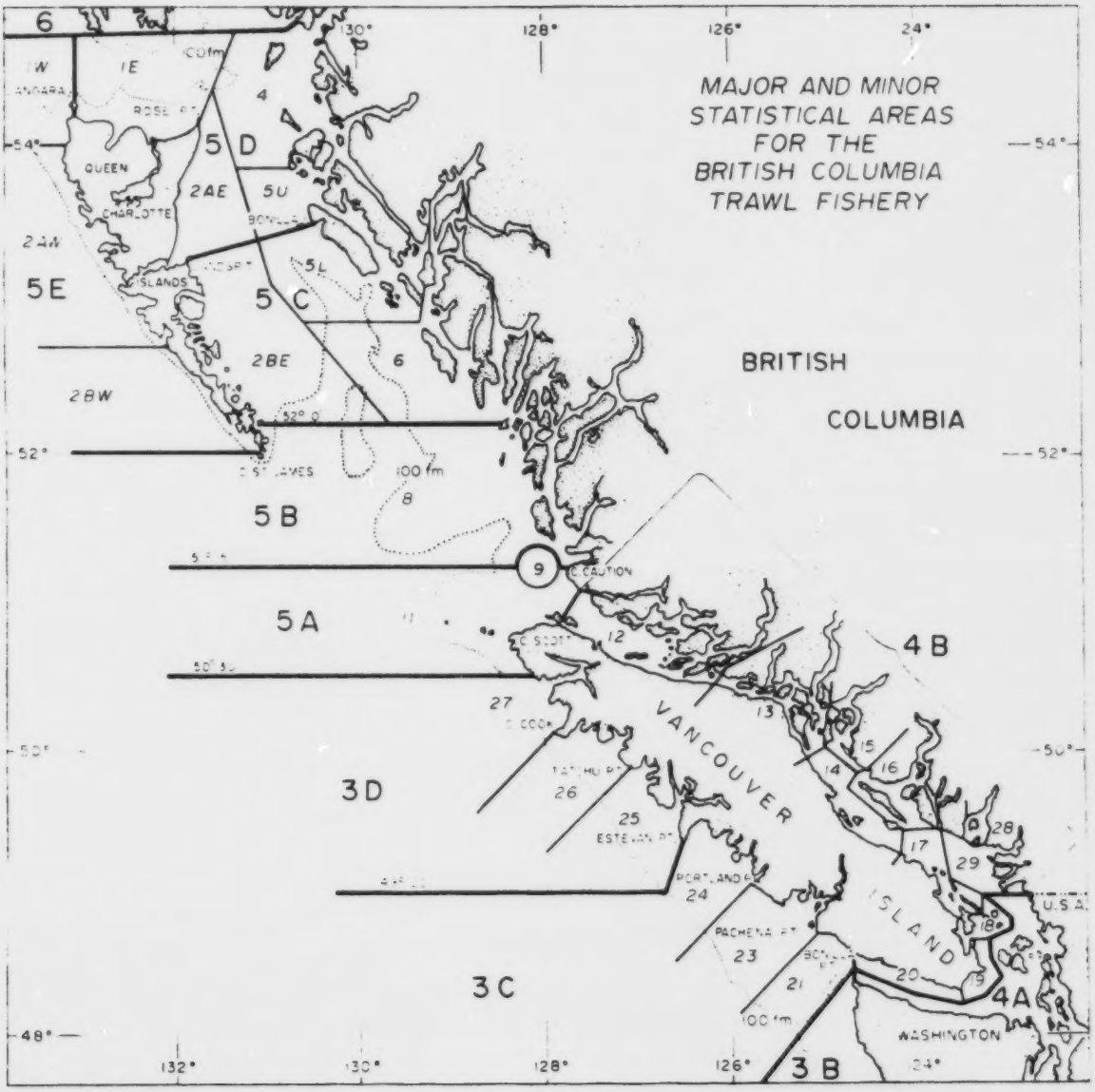

MAJOR AND MINOR
STATISTICAL AREAS
FOR THE
BRITISH COLUMBIA
TRAWL FISHERY
BRITISH
COLUMBIA
VANCOUVER
ISLAND
WASHINGTON
U.S.A.
6
5E
5D
5C
5B
5A
4B
4A
3D
3C
3B
2AE
2AW
2BE
2BW
5U
100 fm
130°
128°
126°
124°
132°
54°
52°
50°
48°

Figure 2.

MINOR STATISTICAL AREA DIVISIONS

Minor areas are used to give more detailed information on region of capture of groundfish. They are areas within major areas and are basically the former Fisheries Management statistical areas with some modifications. Figure 3 illustrates the areas, and the modifications are catalogued below:

1. Minor area 101 has been divided into two minor areas, 1E and 1W. This boundary lies along longitude 133° W.

2. Minor area 142 has been divided into two minor areas, 2AW and 2BW. This boundary lies along 52°40'N latitude.

3. The boundary between Area 102 and Area 104 has been shifted northwestward to Rose Spit. Area 4 was expanded to bring the whole of the "Two Peaks" and "Dundas" grounds within Area 4. This has meant the elimination of Areas 103 and 3xy.

4. Minor area 105 has been divided into two sub-areas, designated 5U and 5L. This boundary lies along the Sandspit-Bonilla Island line, which is the internationally agreed line of division between north and south Hecate Strait (Areas 5D and 5C).

5. The boundary between Areas 5D and 5C has been continued through Area 102 to divide it into two minor areas, 2AE and 2BE.

6. The southern boundary of Areas 102 and 106 has been shifted to lie along 52°10'N latitude to conform with the boundary between Areas 5C and 5D.

7. Area 8 has been expanded to include the whole of the Goose Island Bank. This had involved (a) shifting the northern boundary to 52°10'N latitude and eliminating Area 107, (b) shifting the southern boundary to 51°15' W latitude and eliminating Areas 109 and 110, and (c) the elimination of Area 130, previously used for offshore catches in Queen Charlotte Sound. There is, in this report, no westward limit to Area 8.

8. Area 9 has been changed and is now a circle 12 miles in diameter surrounding the Sea Otter group and the Virgin Rocks ground. It is considered to be part of Area 5A.

9. Area 11 has been expanded to include all of the Cape Scott Bank. This has meant the elimination of Area 111 and the addition of part of Area 127 lying northward of 50°30'N latitude. This is to conform with the boundary between Areas 5A and 3D.

10. The western limit of Area 12 is now Bates Passage.

11. Areas 21, 23, 24, 25, 26, and 27 have been expanded to include Areas 121, 123, 124, 125, 126, and 127, respectively.

12. The boundary between Areas 24 and 25 has been shifted to lie along the boundary between Areas 3C and 3D.

13. The boundary between Areas 23 and 24 has been shifted northwards to Portland Point and it lies on a bearing 225° True. This is to bring the whole of the ground known as Firing Range (which formerly lay on the boundary between these two areas) entirely within Area 23.

All other minor areas remain the same as those defined by the Fisheries Management Statistical Chart.

The following shows the relationship between the major and minor areas:

Major areas		Minor areas
6	Alaska	Southeastern, Yakutat[a]
5E	West Coast Queen Charlotte Islands	1W, 2AW, 2BW
5D	North Hecate Strait	1E, 2AE, 4, 5U
5C	South Hecate Strait	2BE, 5L, 6
5B	North Queen Charlotte Sound	8
5A	South Queen Charlotte Sound	9, 11
3D	Northwest Coast Vancouver Island	27, 26, 25
3C	Southwest Coast Vancouver Island	24, 23, 21
3B	Northwest Washington Coast	"C"
4B	Strait of Georgia[b]	12, 13, 14, 15, 17, 18, 19, 20, 28, 29

[a] Southeastern - from 54°40'N to 137° W. Yakutat from 137° W to 147° W.

[b] Including Johnstone and Queen Charlotte straits and the Canadian portion of the Strait of Juan de Fuca.

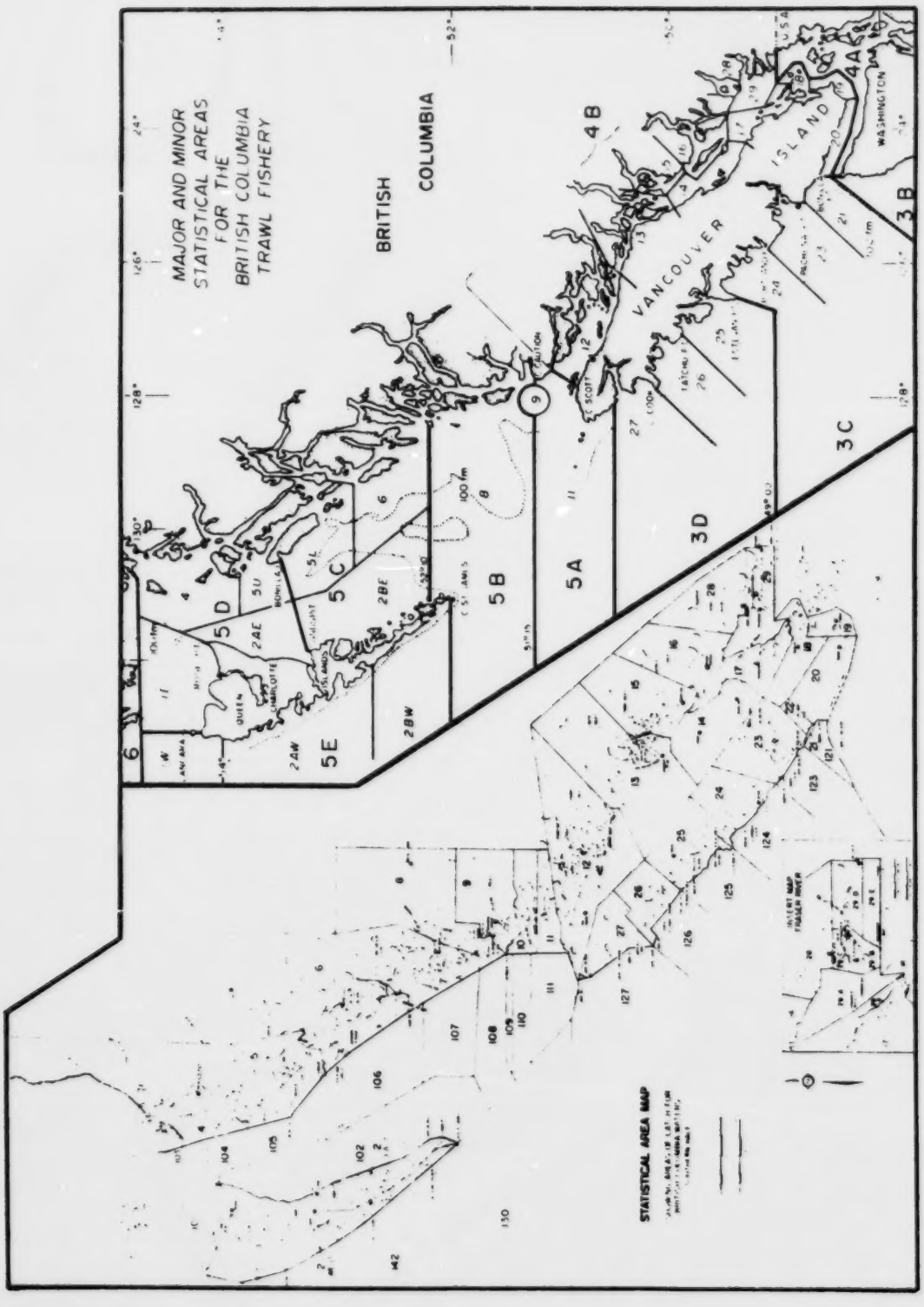

MAJOR AND MINOR
STATISTICAL AREAS
FOR THE
BRITISH COLUMBIA
TRAWL FISHERY
BRITISH
COLUMBIA
VANCOUVER
ISLAND
WASHINGTON
5A
5B
5C
5D
5E
3B
3C
3D
4A
4B
STATISTICAL AREA MAP

Figure 3.

DOMESTIC TRAWL FISHERY

In 1988, catch and effort date were collected by port liaison officers for 94%, by weight, of the total trawl landings. Through the cooperation of the Statistics Division, Fisheries Branch, the remaining 6% of the landings were recorded from sales slips, from which no effort (hours fished) is available. Catch-per-unit-effort (CPUE) statistics obtained from the interview data were used to estimate the effort expended for the catch reported on these sales slips.

From total landed catch and total estimated effort data, an average cpue (t/h) was calculated for each major fishing area. Also calculated was the percentage of total catch and effort expended in each of these areas. These last two statistics show relative importance of each area and are used in the calculation of the "success ratio". This parameter is defined as the percent of the total catch divided by the percent of total effort.

Total landings in 1988 (excluding dumped[1] and discarded[2] fish) by the British Columbia domestic trawl fleet were 55,651 t, 8% below the total for 1987. Effort expended increased 14% to 49,088 hours resulting in an overall CPUE of 1.134 t/h, 20% below the 1987 rate.

Pacific cod was the strongest contributor to the trawl fishery with landings of 10,997 t. This was, however, a decrease of 21% from 1987 levels. Total rockfish landings were 25,714 t, and accounted for 46% of the total trawl landings. Pacific ocean perch landings (6,928 t) increased 9% above 1987 levels. There were also marked increases in landings of yellowtail rockfish (4,741 t), silvergray rockfish (3,503 t), widow rockfish (2,009 t), canary rockfish (1,822 t), Bocaccio (1,314 t) rougheye rockfish (1,089 t), redbanded rockfish (314 t), splitnose rockfish (150 t), shortspine thornyheads (125 t) and shortraker rockfish (58 t). Rock sole (1,960 t) and Dover sole (1,281 t) landings more than doubled 1987 levels. Other species showing increases in 1988 included dogfish (1,968 t), lingcod (2,521 t), English sole (879 t), petrale sole (790 t), sablefish (637 t), rex sole (145 t) and starry flounder (110 t).

Hake (6,054 t) landings dropped 54% and pollock (1,111 t) landings dropped 13%. There were also marked decreases in

---

[1]Fish caught and retained but eventually rejected at the plant as being unsuitable for any utilization.

[2]Fish caught and discarded at sea by fisherman.

landings of yellowmouth rockfish (1,301 t), turbot (375 t), and sharpchin rockfish (241 t).

Annual trawl catch and effort data are shown in Tables 2-7 and Figure 4. Landings by major area, month and species are presented in Tables 8-15. Landings by minor area, month and species are given in Tables 16-44.

AREA 4B--STRAIT OF GEORGIA

This area contributed 15% of the total British Columbia trawl production. There was only a very slight decrease in the amount of effort expended (6,007 h) but a 32% decrease in landings (8,219 t) resulted in a decreased CPUE of 1.368 t/h. Hake accounted for 66% of the catch. Pacific cod, pollock and dogfish were the other main species.

AREA 3C--SOUTHWEST COAST OF VANCOUVER ISLAND

There was a 33% increase in the amount of effort expended (7,557 h) with a 7% decrease in landings (7,898 t) resulting in a decreased CPUE of 1.045 t/h. Pacific cod (1,646 t) and dogfish (1,643 t) were the dominant species. Hake landings (594 t) were the third highest even though they decreased 86% from 1987 levels.

AREA 3D--NORTHWEST COAST OF VANCOUVER ISLAND

The landings (6,799 t) for this area increased 2%, the amount of effort expended (5,544 h) increased 30% and CPUE decreased to 1.226 t/h. Rockfish landings of 5,684 t, of which yellowtail rockfish (2,036 t), silvergrey rockfish (800 t), widow rockfish (644 t), Pacific ocean perch (615 t), and canary rockfish (586 t) were the dominant species, accounted for 84% of the total catch.

AREA 5A--SOUTH QUEEN CHARLOTTE SOUND

Total landings (4,752 t) decreased 27% and total effort expended (6,862 h) decreased 9%, resulting in a slightly decreased CPUE of 0.693 t/h. Pacific cod (799 t), silvergray rockfish (605 t), lingcod (554 t), Pacific ocean perch (564 t),

yellowtail rockfish (378 t), and yellowmouth rockfish (359 t) were the major species caught in this area.

AREA 5B--NORTH QUEEN CHARLOTTE SOUND

Total landings (11,385 t) increased 31%, total effort expended (8,354 h) increased 21% and CPUE (1.363 t/h) increased 9% over 1987 levels. Pacific ocean perch (3,018 t) was the dominant species showing a 16% increase over 1987 landings. The other main species taken were yellowtail rockfish (1,932 t), widow rockfish (1,231 t), Pacific cod (1,050 t), silvergray rockfish (764 t) and lingcod (737 t).

AREA 5C--SOUTH HECATE STRAIT

The amount of effort expended (4,122 h) in this area was 24% higher but landings (4,590 t) were 1% less than those seen in 1987. This resulted in a 20% decrease in CPUE (1.114 t/h). Pacific cod (2,316 t) was the dominant species landed. Pacific ocean perch (714 t) and silvergray rockfish (552 t) were the other main species.

AREA 5D--NORTH HECATE STRAIT

Total landings (7,105 t) decreased 20% and total effort expended (7,510 h) increased 15%, resulting in a decreased CPUE (0.946 t/h). Pacific cod landings of 3,801 t, were 40% lower than in 1987 but they still represented 53% of the landings from this area. Rock sole (1,209 t), English sole (602 t) and dover sole (515 t) were other main species caught.

AREA 5E--WEST COAST OF QUEEN CHARLOTTE ISLANDS

There was a 17% rise in the amount of effort expended (3,134 h) and an 8% rise in the total landings (4,902 t). This resulted in a slightly lower CPUE (1.564 t/h) than in 1987. Total rockfish landings of 4,423 t accounted for 90% of the total catch. Pacific ocean perch (1,826 t), rougheye rockfish (817 t), and redstripe rockfish (612 t) were the dominant species.

The following species were observed in trawl landings in British Columbia in 1988.

Family and common name	Scientific name
FISHES	
Acipenseridae	
Green sturgeon	Acipenser medirostris Ayres
Anarhichadidae	
Wolf-eel	Anarrhichthys ocellatus Ayres
Anoplopomatidae	
Sablefish	Anoplopoma fimbria (Pallas)
Clupeidae	
American shad	Alosa sapidissima (Wilson)
Embiotocidae	
Pile perch	Rhacochilus vacca (Girard)
Gadidae	
Pacific cod, true cod or gray cod	Gadus macrocephalus Tilesius
Pacific hake	Merluccius productus (Ayres)
Walleye pollock	Theragra chalcogramma (Pallas)
Hexagrammidae	
Lingcod	Ophiodon elongatus Girard
Hexanchidae	
Sixgill shark	Hexanchus griseus (Bonnaterre)
Pleuronectidae	
Arrowtooth flounder or turbot	Atheresthes stomias (Jordan and Gilbert)
Petrale sole	Eopsetta jordani (Lockington)
Rex sole	Glyptocephalus zachirus Lockington
Flathead sole	Hippoglossoides elassodon (Jordan and Gilbert)
Rock sole	Lepidopsetta bilineata (Ayres)
Yellowfin sole	Limanda aspera (Pallas)
Dover sole	Microstomus pacificus (Lockington)
English sole	Parophrys vetulus Girard
Starry Flounder	Platichthys stellatus (Pallas)
Curlfin sole	Pleuronichthys decurrens (Jordan and Gilbert)
Sand sole	Psettichthys melanostictus (Girard)
Rajidae	
Big skate	Raja binoculata Girard
Longnose skate	Raja rhina Jordan and Gilbert

Family and common name	Scientific name
Scorpaenidae	
Rougheye rockfish	Sebastes aleutianus (Jordan and Evermann)
Pacific ocean perch	Sebastes alutus (Gilbert)
Redbanded rockfish	Sebastes babcocki (Thompson)
Shortraker rockfish	Sebastes borealis Barsukov
Silvergray rockfish	Sebastes brevispinis (Bean)
Copper rockfish	Sebastes caurinus Richardson
Darkblotched rockfish	Sebastes crameri (Jordan)
Splitnose rockfish	Sebastes diploproa (Gilbert)
Greenstriped rockfish	Sebastes elongatus Ayres
Widow rockfish	Sebastes entomelas (Jordan and Gilbert)
Yellowtail rockfish	Sebastes flavidus (Ayres)
Rosethorn rockfish	Sebastes helvomaculatus Ayres
Quillback rockfish	Sebastes maliger (Jordan and Gilbert)
Black rockfish	Sebastes melanops Girard
China rockfish	Sebastes nebulosus Ayres
Tiger rockfish	Sebastes nigrocinctus Ayres
Bocaccio	Sebastes paucispinis Ayres
Canary rockfish	Sebastes pinniger (Gill)
Redstripe rockfish	Sebastes proriger (Jordan and Gilbert)
Yellowmouth rockfish	Sebastes reedi (Westrheim and Tsuyuki)
Yelloweye rockfish	Sebastes ruberrimus (Cramer)
Sharpchin rockfish	Sebastes zacentrus (Gilbert)
Shortspine thornyhead	Sebastolobus alascanus Bean
Squalidae	
Spiny dogfish	Squalus acanthias Linnaeus
INVERTEBRATES	
Octopoda	
Octopus or devilfish	Octopus sp.
Teuthoidea	
Squid	Loligo opalescens Berry

Table 2. Total catch (t) and related effort[a] (h) for the British Columbia trawl fleet in 1988 (excludes dumped and discarded fish).

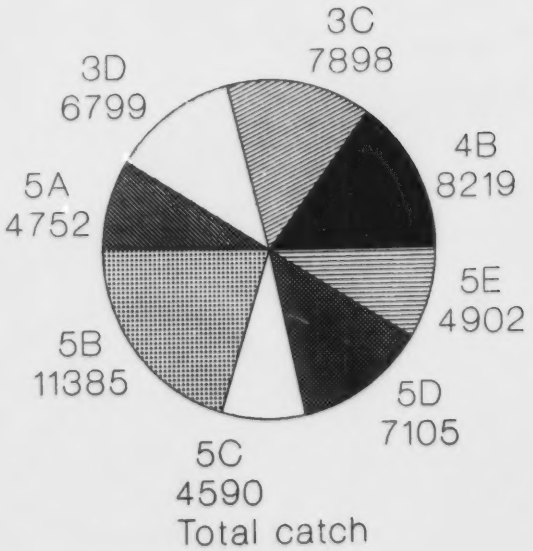
Month	Major area									
	4B		3C		3D		5A		5B	
	Catch	Effort	Catch	Effort	Catch	Effort	Catch	Effort	Catch	Effort
January	419.82	706	8.44	23	821.68	391	184.62	75	313.57	195
February	1,684.42	756	781.21	732	1,131.08	771	243.96	224	317.20	193
March	3,101.98	679	602.51	510	484.14	402	188.07	150	148.48	127
April	1,676.76	359	1,488.36	814	509.84	483	686.44	567	1,455.38	791
May	105.48	271	1,091.17	1046	742.58	695	565.33	1195	2,275.79	1670
June	61.18	91	776.81	932	518.59	473	858.65	1477	1,908.45	1756
July	46.00	171	535.31	613	316.25	361	497.43	779	1,470.77	928
August	112.48	304	984.97	1001	266.79	389	370.50	637	821.41	632
September	326.63	480	868.00	943	498.31	543	418.78	833	846.75	700
October	157.51	546	548.50	739	599.85	445	372.31	541	1,301.50	922
November	224.33	708	151.86	140	667.67	390	204.62	246	422.91	385
December	302.19	936	60.71	64	242.49	201	161.46	138	103.08	55
Total	8,218.78	6007	7,897.85	7557	6,799.27	5544	4,752.17	6862	11,385.29	8354
CPUE (t/h)	1.368		1.045		1.226		.693		1.363	
% catch	14.77		14.19		12.22		8.54		20.46	
% effort	12.24		15.39		11.29		13.98		17.02	
Success ratio	1.21		.92		1.08		.61		1.20	

[a] This effort was prorated using the known CPUE obtained from interviews which accounted for 94% of the total catch.

Table 2 (cont'd).

Month	Major area							
	5C		5D		5E		Total	
	Catch	Effort	Catch	Effort	Catch	Effort	Catch	Effort
January	242.17	205	392.05	429	291.62	252	2,673.97	2276
February	758.69	473	788.96	692	664.56	481	6,370.08	4322
March	369.64	215	769.72	746	619.39	453	6,283.93	3282
April	811.72	632	1,068.25	1215	411.92	255	8,108.67	5116
May	382.93	655	652.47	967	743.48	470	6,559.23	6969
June	552.78	552	899.87	971	286.66	305	5,862.99	6557
July	385.92	343	381.35	465	202.64	64	3,835.67	3724
August	92.73	97	628.39	473	155.49	101	3,432.76	3634
September	352.32	388	648.14	566	144.83	77	4,103.76	4530
October	323.81	286	544.86	662	401.38	184	4,249.72	4325
November	275.13	228	197.98	215	639.49	262	2,783.99	2574
December	42.10	48	133.39	107	340.95	230	1,386.37	1779
Total	4,589.94	4122	7,105.43	7508	4,902.41	3134	55,651.14	49088
CPUE (t/h)	1.114		.946		1.564		1.134	
% catch	8.24		12.77		8.81			
% effort	8.40		15.30		6.38			
Success ratio	.98		.83		1.38			

Trawl Catch (t) and Effort (hr) by
major area in 1988



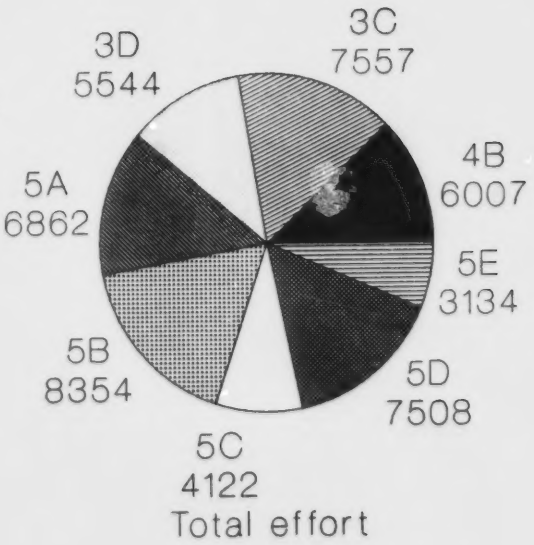


Figure 4.

Table 3. Total British Columbia trawl landings (t) by main species and major area in 1988 (excluding dumped and discarded fish).

Species	Major area								
	4B	3C	3D	5A	5B	5C	5D	5E	Total
English sole	32.62	62.70	20.11	16.09	54.82	86.16	601.79	4.45	878.74
Rock sole	6.05	123.92	34.89	127.69	268.42	189.29	1,209.19	.90	1,960.35
Petrale sole	3.48	180.18	275.75	66.07	100.62	92.34	41.22	30.40	790.06
Dover sole	10.57	369.73	142.89	33.00	80.96	11.42	515.41	116.89	1,280.87
Rex sole	.08	8.17	2.39	1.50	3.12	4.61	117.97	7.42	145.26
Starry flounder	54.34	4.94	1.01	.85	-	.49	48.72	-	110.35
Turbot	4.57	31.45	35.14	115.62	49.12	2.35	118.62	18.30	375.17
Other flatfish [a]	66.49	43.31	11.00	9.50	6.18	.22	4.03	2.71	143.44
Pacific cod	1,222.16	1,645.89	146.35	799.45	1,049.63	2,315.87	3,800.82	17.00	10,997.17
Lingcod	13.01	565.33	282.83	553.68	737.39	166.57	182.62	19.65	2,521.08
Sablefish	1.40	371.32	84.73	7.84	38.23	9.56	12.92	110.64	636.64
Pollock	1,094.81	2.74	.11	1.62	2.11	.48	9.32	.04	1,111.23
Hake	5,460.48	593.51	-	-	-	-	-	-	6,053.99
Ocean perch	-	184.28	615.05	564.06	3,018.41	714.22	6.03	1,826.21	6,928.26
Other rockfish [a]	9.71	1,976.78	5,068.53	2,341.64	5,746.51	909.99	135.54	2,596.64	18,785.34
Misc. species [a]	17.27	12.70	1.31	10.79	21.42	21.66	172.67	.94	258.76
Dogfish	220.62	1,643.17	17.20	85.90	-	1.51	.03	-	1,968.43
Animal food [a]	-	-	-	-	4.29	25.57	50.53	44.85	125.24
Reduction [a]	1.12	77.73	59.98	16.87	204.06	37.63	78.00	105.37	580.76
Total	8,218.78	7,897.85	6,799.27	4,752.17	11,385.29	4,589.94	7,105.43	4,902.41	55,651.14
Effort	6,007	7,557	5,544	6,862	8,354	4,122	7,508	3,134	49,088

[a] Refer to Table 6 for breakdown by species

Table 4. British Columbia midwater trawl landings (t) by species and major area in 1988 (excluding dumped and discarded fish).

Species	Major area						Total
	4B	3C	3D	5A	5B	5C	
English sole	-	2.13	.01	-	.02	-	2.16
Rock sole	-	-	-	-	.05	-	.05
Petrale sole	-	-	.55	-	.22	-	.77
Dover sole	-	-	.01	-	-	-	.01
Rex sole	-	-	.08	-	-	-	.08
Pacific cod	-	-	2.01	-	6.59	-	8.60
Lingcod	-	-	1.14	-	6.68	-	7.82
Pollock	1,091.09	2.46	-	-	.25	-	1,093.80
Hake	5,460.43	593.51	-	-	-	-	6,053.94
Ocean perch	-	-	10.01	-	16.23	-	26.24
Other rockfish	-	47.83	1,737.13	57.02	2,014.97	6.62	3,863.57
Misc. species	-	-	-	-	.82	-	.82
Dogfish	72.67	-	-	-	-	-	72.67
Animal food	-	-	-	-	.25	-	.25
Reduction	-	-	.07	-	109.78	-	109.85
Total	6,624.19	645.93	1,751.01	57.02	2,155.86	6.62	11,240.63

Table 5. British Columbia midwater[a] trawl landings (t) and related effort[b] (h) in 1988.

	Major area													
	4B		3C		3D		5A		5B		5C		Total	
Month	Catch	Effort	Catch	Effort	Catch	Effort	Catch	Effort	Catch	Effort	Catch	Effort	Catch	Effort
January	136.20	14	-	2	371.56	119	-	-	-	-	-	-	507.76	136
February	1,553.29	220	40.87	9	536.21	324	-	-	-	-	6.62	4	2,136.99	557
March	2,987.72	234	45.08	23	185.11	152	-	-	-	-	-	-	3,217.91	408
April	1,630.98	97	-	-	87.40	155	-	-	283.79	129	-	-	2,002.17	381
May	34.64	4	82.22	5	9.79	6	.43	13	1,208.20	537	-	-	1,335.28	565
June	-	-	199.41	16	-	-	-	3	575.58	320	-	-	774.99	339
July	-	-	15.53	2	-	-	-	-	85.81	24	-	-	101.34	26
August	-	-	46.10	41	-	-	-	-	-	-	-	-	46.10	41
September	190.04	22	189.93	26	1.13	6	-	-	-	-	-	-	381.10	53
October	-	-	26.79	2	157.25	43	48.71	19	2.04	4	-	-	234.79	68
November	18.14	4	-	-	290.26	121	4.65	10	.44	4	-	-	313.49	140
December	73.18	10	-	-	112.30	104	3.23	5	-	-	-	-	186.71	119
Total	6,624.19	603	645.93	126	1,751.01	1030	57.02	50	2,155.86	1017	6.62	4	11,240.63	2831

[a] Midwater trawl catch and effort are included in all the trawl tables in this report.
[b] This effort was prorated using the known CPUE obtained from interviews which accounted for 90% of the midwater trawl catch.

Table 6. Species landed (t) as "other flatfish", "other rockfish", miscellaneous species", "animal food" and "reduction" by major area in 1988 (excluding dumped and discarded fish).

	Major area								
Species	4B	3C	3D	5A	5B	5C	5D	5E	Total
Other flatfish									
Curlfin sole	-	-	-	-	-	.18	-	-	.18
Flathead sole	.05	-	-	-	-	-	.96	-	1.01
Sand sole	12.67	.42	-	-	-	.04	2.54	-	15.67
Yellowfin sole	-	-	-	-	-	-	.44	-	.44
Unspecified	53.77	42.89	11.00	9.50	6.18	-	.09	2.71	126.14
Total	66.49	43.31	11.00	9.50	6.18	.22	4.03	2.71	143.44
Other rockfish									
Black rockfish	-	-	.46	-	.16	5.34	-	-	5.96
Bocaccio	-	288.93	300.59	233.82	388.15	35.91	18.30	48.14	1,313.84
Canary rockfish	.01	480.12	585.78	188.57	405.09	79.79	3.81	79.10	1,822.27
China rockfish	.08	-	-	.50	-	.02	.18	-	.78
Copper rockfish	-	-	-	-	-	.46	7.96	-	8.42
Darkblotched rockfish	-	12.49	26.00	15.12	6.82	2.84	-	19.77	83.04
Greenstriped rockfish	-	.34	2.95	6.46	2.37	1.68	-	.44	14.24
Quillback rockfish	.48	.27	-	.25	.14	.03	1.02	-	2.19
Redbanded rockfish	-	26.92	25.08	34.64	181.03	10.43	2.01	33.46	313.57
Redstripe rockfish	-	328.32	349.70	295.21	122.50	94.61	1.10	612.04	1,803.48
Rosethorn rockfish	-	-	-	.22	1.05	.18	-	-	1.45
Rougheye rockfish	-	28.17	42.82	36.10	149.96	12.45	1.70	817.38	1,088.58
Sharpchin rockfish	-	28.16	12.18	79.26	60.73	24.98	-	35.88	241.19
Shortraker rockfish	-	6.13	1.40	1.95	30.60	.42	-	17.78	58.28
Shortspine thornyhead	-	8.71	8.82	1.32	12.39	4.65	4.29	84.62	124.80
Silvergray rockfish	.24	397.54	799.68	604.87	763.94	551.75	9.34	376.02	3,503.38

Table 6 (cont'd)

Species	Major area								
	4B	3C	3D	5A	5B	5C	5D	5E	Total
Other rockfish (cont'd)									
Splitnose rockfish	-	34.10	12.44	8.32	75.12	1.19	-	18.55	149.72
Tiger rockfish	-	-	-	-	-	-	.30	-	.30
Widow rockfish	-	27.79	643.70	47.96	1,230.68	7.89	24.41	26.85	2,009.28
Yelloweye rockfish	.01	1.21	.81	1.79	1.01	-	.37	10.64	15.84
Yellowmouth rockfish	-	6.55	168.66	359.26	357.89	16.66	.52	391.82	1,301.36
Yellowtail rockfish	6.74	279.45	2,036.26	377.56	1,931.82	39.76	52.12	17.05	4,740.76
Unspecified	2.15	21.58	51.20	48.46	25.06	18.95	8.11	7.10	182.61
Total	9.71	1,976.78	5,068.53	2,341.64	5,746.51	909.99	135.54	2,596.64	18,785.34
Miscellaneous species									
Octopus	3.07	.92	.41	.95	1.09	5.68	16.11	.04	28.27
Perch	.54	.01	-	.63	-	-	-	-	1.18
Shad	.05	-	-	-	-	-	-	-	.05
Shark	-	-	.11	-	-	-	-	.11	.22
Skate wings	13.56	11.27	.37	9.16	20.07	15.98	156.50	.54	227.45
Squid	-	-	-	-	-	-	-	.25	.25
Sturgeon	-	.31	.42	.01	-	-	-	-	.74
Wolf-eel	.04	.19	-	-	-	-	.06	-	.29
Unspecified	.01	-	-	.04	.26	-	-	-	.31
Total	17.27	12.70	1.31	10.79	21.42	21.66	172.67	.94	258.76

Table 6 (cont'd)

Species	Major area 4B	3C	3D	5A	5B	5C	5D	5E	Total
Animal food									
Pacific cod	-	-	-	-	-	.46	7.92	-	8.38
Sablefish	-	-	-	-	-	-	-	.93	.93
Unspecified	-	-	-	-	4.29	25.11	42.61	43.92	115.93
Total	.00	.00	.00	.00	4.29	25.57	50.53	44.85	125.24
Reduction									
Dover sole	-	1.86	-	-	-	-	-	5.90	7.76
English sole	-	-	-	-	-	-	.31	-	.31
Lingcod	-	.10	-	-	-	-	.22	-	.32
Misc. sole	.33	.13	-	-	-	-	-	-	.46
Ocean perch	-	-	-	-	.18	-	-	28.56	28.74
Other rockfish	-	.94	.33	4.93	92.02	-	.34	31.71	130.27
Pacific cod	.61	14.83	-	-	-	10.12	63.55	-	89.11
Petrale sole	-	3.21	-	-	-	-	-	-	3.21
Rock sole	-	-	-	-	-	-	2.62	-	2.62
Sablefish	-	.40	-	-	-	-	-	.73	1.13
Skate wings	-	-	-	-	-	-	.41	-	.41
Starry flounder	-	-	-	-	-	-	.45	-	.45
Turbot	.06	-	-	.14	-	-	1.07	-	1.27
Unspecified	.12	56.26	59.65	11.80	111.86	27.51	9.03	38.47	314.70
Total	1.12	77.73	59.98	16.87	204.06	37.63	78.00	105.37	580.76

Table 7. British Columbia trawl landings (t) by species and minor area in 1988.

Species	Minor area				
	12	13	14	15	16
English sole	.76	-	2.73	-	-
Rock sole	1.17	.22	1.27	-	-
Petrale sole	-	-	.02	-	-
Dover sole	-	-	-	-	-
Rex sole	-	-	-	-	-
Flathead sole	-	.05	-	-	-
Sand sole	12.60	.07	-	-	-
Turbot	-	-	-	-	-
Starry flounder	6.44	13.41	.06	33.13	-
Other flatfish	5.59	-	3.95	-	-
Pacific cod	7.85	7.33	95.66	.02	-
Lingcod	.03	-	.09	-	-
Sablefish	-	-	.17	-	-
Pollock	-	-	1.36	-	142.48
Pacific ocean perch	-	-	-	-	-
Bocaccio	-	-	-	-	-
Canary rockfish	-	-	-	-	-
Redstripe rockfish	-	-	-	-	-
Rougheye rockfish	-	-	-	-	-
Silvergray rockfish	-	-	-	-	-
Yellowmouth rockfish	-	-	-	-	-
Yellowtail rockfish	-	-	.05	-	-
Widow rockfish	-	-	-	-	-
Other rockfish	.08	-	.06	.02	-
Hake	-	-	3.18	-	198.49
Octopus	.02	-	.03	-	-
Perch	-	-	.41	-	-
Skate wings	2.08	.21	.16	-	-
Squid	-	-	-	-	-
Sturgeon	-	-	-	-	-
Misc. species	-	-	-	-	-
Dogfish	-	-	58.46	-	-
Reduction	-	-	-	-	-
Animal food	-	-	-	-	-
Total	36.62	21.29	167.66	33.17	340.97
Discards	3.76	10.89	26.50	1.26	-

Table 7 (cont'd)

Species	Minor area 17	18	19	20	29
English sole	5.41	10.72	4.56	8.44	-
Rock sole	1.13	1.77	.02	.47	-
Petrale sole	-	-	.05	3.41	-
Dover sole	-	.10	-	10.47	-
Rex sole	-	-	-	.08	-
Flathead sole	-	-	-	-	-
Sand sole	-	-	-	-	-
Turbot	-	-	3.72	.85	-
Starry flounder	.98	.26	-	.01	.05
Other flatfish	9.36	16.52	2.67	14.25	1.43
Pacific cod	10.93	103.83	955.49	40.85	.20
Lingcod	.09	1.03	8.19	3.58	-
Sablefish	-	.01	.99	.23	-
Pollock	575.93	3.49	1.93	-	369.62
Pacific ocean perch	-	-	-	-	-
Bocaccio	-	-	-	-	-
Canary rockfish	-	-	.01	-	-
Redstripe rockfish	-	-	-	-	-
Rougheye rockfish	-	-	-	-	-
Silvergray rockfish	-	-	.24	-	-
Yellowmouth rockfish	-	-	-	-	-
Yellowtail rockfish	-	.02	.16	6.51	-
Widow rockfish	-	-	-	-	-
Other rockfish	.78	.95	.50	.21	.12
Hake	708.82	-	-	185.50	4,364.49
Octopus	.06	.82	1.82	.32	-
Perch	.12	.01	-	-	-
Skate wings	.65	2.96	5.57	1.54	.39
Squid	-	-	-	-	-
Sturgeon	-	-	-	-	-
Misc. species	-	-	.06	.04	-
Dogfish	25.05	36.53	51.45	-	49.13
Reduction	-	-	.72	.40	-
Animal food	-	-	-	-	-
Total	1,339.31	179.02	1,038.15	277.16	4,785.43
Discards	10.39	7.90	29.88	27.00	-

Table 7 (cont'd)

Species	Minor area 21	23	24	25	26
English sole	7.21	42.43	13.06	17.08	1.77
Rock sole	5.46	95.47	22.99	13.76	2.00
Petrale sole	22.34	109.35	48.49	252.61	12.43
Dover sole	4.25	263.53	101.95	129.24	4.70
Rex sole	-	1.12	7.05	1.72	.26
Flathead sole	-	-	-	-	-
Sand sole	-	-	.42	-	-
Turbot	13.10	8.21	10.14	26.68	7.26
Starry flounder	.01	1.08	3.85	.48	-
Other flatfish	3.73	15.43	23.73	6.68	.11
Pacific cod	396.73	1,037.01	212.15	46.98	50.36
Lingcod	36.80	402.38	126.15	122.42	58.30
Sablefish	85.86	255.61	29.85	55.53	13.42
Pollock	.08	2.66	-	-	.11
Pacific ocean perch	24.55	117.91	41.82	123.20	50.75
Bocaccio	141.31	89.64	57.98	181.40	44.50
Canary rockfish	134.60	189.71	155.81	321.43	109.12
Redstripe rockfish	52.88	176.19	99.25	64.31	76.70
Rougheye rockfish	1.29	15.47	11.41	21.12	5.36
Silvergray rockfish	44.98	163.04	189.52	330.79	225.47
Yellowmouth rockfish	1.34	4.18	1.03	7.59	2.25
Yellowtail rockfish	40.89	93.07	145.49	1,474.60	398.38
Widow rockfish	-	6.62	21.17	467.33	126.62
Other rockfish	11.03	76.60	52.28	86.18	20.88
Hake	116.09	477.42	-	-	-
Octopus	.07	.45	.40	.02	.05
Perch	-	.01	-	-	-
Skate wings	.29	8.00	2.98	.26	.05
Squid	-	-	-	-	-
Sturgeon	.11	.13	.07	.01	.29
Misc. species	-	.19	-	-	.11
Dogfish	4.68	1,428.78	209.71	2.27	6.36
Reduction	9.77	67.85	.11	20.62	15.58
Animal food	-	-	-	-	-
Total	1,159.45	5,149.54	1,588.86	3,774.31	1,233.19
Discards	102.19	700.65	128.88	180.75	44.50

Table 7 (cont'd)

Species	Minor area 27	9	11	8	2BE
English sole	1.26	-	16.09	54.82	64.29
Rock sole	19.13	.32	127.37	268.42	162.26
Petrale sole	10.71	.85	65.22	100.62	71.77
Dover sole	8.95	3.83	29.17	80.96	5.58
Rex sole	.41	-	1.50	3.12	3.71
Flathead sole	-	-	-	-	-
Sand sole	-	-	-	-	.04
Turbot	1.20	-	115.62	49.12	2.35
Starry flounder	.53	-	.85	-	-
Other flatfish	4.21	-	9.50	6.18	.18
Pacific cod	49.01	1.64	797.81	1049.63	1,991.74
Lingcod	102.11	-	553.68	737.39	148.32
Sablefish	15.78	.02	7.82	38.23	7.73
Pollock	-	-	1.62	2.11	.48
Pacific ocean perch	441.10	18.17	545.89	3018.41	611.63
Bocaccio	74.69	-	233.82	388.15	28.60
Canary rockfish	155.23	-	188.57	405.09	53.24
Redstripe rockfish	208.69	-	295.21	122.50	78.30
Rougheye rockfish	16.34	-	36.10	149.96	12.45
Silvergray rockfish	243.42	-	604.87	763.94	473.39
Yellowmouth rockfish	158.82	-	359.26	357.89	13.35
Yellowtail rockfish	163.28	2.09	375.47	1,931.82	26.92
Widow rockfish	49.75	-	47.96	1,230.68	7.85
Other rockfish	34.28	-	198.29	396.48	69.87
Hake	-	-	-	-	-
Octopus	.34	-	.95	1.09	4.64
Perch	-	-	.63	-	-
Skate wings	.06	-	9.16	20.07	14.32
Squid	-	-	-	-	-
Sturgeon	.12	-	.01	-	-
Misc. species	-	-	.04	.26	-
Dogfish	8.57	-	85.90	-	1.51
Reduction	23.78	-	16.87	204.06	37.19
Animal food	-	-	-	4.29	25.20
Total	1,791.77	26.92	4,725.25	11,385.29	3,916.91
Discards	22.41	-	181.59	516.26	182.21

Table 7 (cont'd)

Species	Minor area 5L	6	2AE	1E	4
English sole	21.45	.42	-	4.32	451.44
Rock sole	25.08	1.95	18.90	1.97	829.42
Petrale sole	18.80	1.77	-	-	7.96
Dover sole	1.48	4.36	-	.03	419.33
Rex sole	.90	-	-	.22	108.08
Flathead sole	-	-	-	-	.96
Sand sole	-	-	-	-	.67
Turbot	-	-	-	6.07	103.90
Starry flounder	.49	-	.52	.75	46.60
Other flatfish	-	-	-	-	.53
Pacific cod	312.39	11.74	2.27	15.58	1,399.24
Lingcod	12.47	5.78	-	6.66	133.22
Sablefish	.87	.96	-	.01	8.61
Pollock	-	-	-	-	5.48
Pacific ocean perch	27.08	75.51	-	.64	5.07
Bocaccio	2.26	5.05	-	.06	.67
Canary rockfish	11.14	15.41	-	1.59	1.80
Redstripe rockfish	11.97	4.34	-	.35	.58
Rougheye rockfish	-	-	-	1.69	.01
Silvergray rockfish	44.69	33.67	-	.54	1.36
Yellowmouth rockfish	.78	2.53	-	-	-
Yellowtail rockfish	7.06	5.78	-	.33	43.52
Widow rockfish	.04	-	-	-	.13
Other rockfish	1.11	.19	-	.32	11.14
Hake	-	-	-	-	-
Octopus	1.04	-	.08	-	4.46
Perch	-	-	-	-	-
Skate wings	1.66	-	-	.89	126.71
Squid	-	-	-	-	-
Sturgeon	-	-	-	-	-
Misc. species	-	-	-	-	.06
Dogfish	-	-	-	-	-
Reduction	-	.44	-	.35	72.81
Animal food	.37	-	-	-	40.55
Total	503.13	169.90	21.77	42.37	3,824.31
Discards	4.76	-	46.31	57.38	343.30

Table 7 (cont'd)

Species	Minor area 5U	1W	2AW	2BW	Total
English sole	146.03	4.45	-	-	878.74
Rock sole	358.90	.90	-	-	1,960.35
Petrale sole	33.26	13.38	10.82	6.20	790.06
Dover sole	96.05	72.15	44.10	.65	1,280.87
Rex sole	9.67	4.56	2.86	-	145.26
Flathead sole	-	-	-	-	1.01
Sand sole	1.87	-	-	-	15.67
Turbot	8.65	11.08	7.22	-	375.17
Starry flounder	.85	-	-	-	110.35
Other flatfish	-	-	-	2.71	126.76
Pacific cod	2,383.73	13.19	3.76	.05	10,997.17
Lingcod	42.74	16.72	2.85	.08	2,521.08
Sablefish	4.30	69.98	34.54	6.12	636.64
Pollock	3.84	.04	-	-	1,111.23
Pacific ocean perch	.32	1,078.42	398.81	348.98	6,928.26
Bocaccio	17.57	23.60	19.53	5.01	1,313.84
Canary rockfish	.42	36.12	30.32	12.66	1,822.27
Redstripe rockfish	.17	113.48	484.55	14.01	1,803.48
Rougheye rockfish	-	464.01	350.96	2.41	1,088.58
Silvergray rockfish	7.44	130.70	217.73	27.59	3,503.38
Yellowmouth rockfish	.52	102.45	285.60	3.77	1,301.36
Yellowtail rockfish	8.27	10.19	5.60	1.26	4,740.76
Widow rockfish	24.28	5.38	21.27	.20	2,009.28
Other rockfish	12.78	148.24	59.69	20.31	1,202.39
Hake	-	-	-	-	6,053.99
Octopus	11.57	.04	-	-	28.27
Perch	-	-	-	-	1.18
Skate wings	28.90	.53	.01	-	227.45
Squid	-	.19	.06	-	.25
Sturgeon	-	-	-	-	.74
Misc. species	-	.11	-	-	.87
Dogfish	.03	-	-	-	1,968.43
Reduction	4.84	28.52	59.91	16.94	580.76
Animal food	9.98	32.70	12.15	-	125.24
Total	3,216.98	2,381.12	2,052.34	468.95	55,651.14
Discards	159.37	54.30	12.92	-	2,855.36

Tables of monthly catch (t) by major area

TABLE 8. 1988 BRITISH COLUMBIA TRAWL LANDINGS (T) OF GROUNDFISH - INTERNATIONAL AREA 4B STRAIT OF GEORGIA

	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP	OCT	NOV	DEC	TOTAL
ENGLISH S.	1.63	2.23	.81	.86	2.53		1.40	.94	5.19	4.39	4.98	7.66	32.62
ROCK S.	.94	.25	.73		.47					.02	1.33	2.31	6.05
PETRALE S.					3.41	.02				.04		.01	3.48
DOVER S.					2.26	.25	4.59	2.69	.68		.10		10.57
REX SOLE					.07		.01						.08
STARRY FLDR	4.95	.89	28.96	12.84	5.78	.02		.05			.51	.34	54.34
TURBOT	.17	.03	.03	.18	.17	.14	.36	.21	.11	.08	1.74	1.35	4.57
OTHER FLAT.	16.38	9.66	6.94	6.28	5.87	3.92	.43	.51	.76	5.01	6.03	4.70	66.49
PACIFIC COD	227.76	101.77	74.49	23.43	28.52	24.03	28.96	92.40	120.06	134.77	172.20	193.77	1222.16
LINGCOD	.03				1.25	1.99	.41	.77	1.16	4.10	3.21	.09	13.01
SABLEFISH	.03	.04			.09	.13	.07	.07	.01	.13	.29	.54	1.40
POLLOCK	39.47	724.01	299.44						1.36		6.80	23.73	1094.81
HAKE	99.12	807.51	2660.63	1607.74	34.64				188.68		11.35	50.81	5460.48
OCEAN PERCH													
OTHER ROCKF.	.24	.25	.16	.77	4.87	1.06	.04	.01	.30	.31	.72	.98	9.71
MISC. SP.	2.75	1.52	1.80	1.42	.44	.48	.26	.50	1.49	1.77	1.86	2.98	17.27
DOGFISH	26.25	36.19	27.99	23.24	14.71	29.14	9.12	14.33	6.83	6.69	13.21	12.92	220.62
ANIMAL FOOD REDUCTION	.10	.07			.40		.35			.20			1.12
TOTAL	419.82	1684.42	3101.98	1676.76	105.48	61.18	46.00	112.48	326.63	157.51	224.33	302.19	8218.78

TABLE 9. 1988 BRITISH COLUMBIA TRAWL LANDINGS (T) OF GROUNDFISH - INTERNATIONAL AREA 3C SOUTHWEST COAST VANCOUVER ISLAND.

	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP	OCT	NOV	DEC	TOTAL
ENGLISH S.		5.29	4.28	5.73	8.46	5.13	10.23	6.91	6.18	5.81	4.32	.37	62.70
ROCK S.		5.89	10.27	11.58	15.20	13.47	4.65	26.23	19.70	15.64	1.29		123.92
PETRALE S.	.46	36.59	17.92	7.18	23.08	13.78	10.95	20.27	25.05	19.17	3.84	1.89	180.18
DOVER S.		38.99	59.60	107.44	68.05	5.60	30.47	26.22	21.62	7.43	4.26	.05	369.73
REX SOLE		6.80	.32	.32	.18	.55							8.17
STARRY FLDR		.01	3.12	1.19				.57	.05				4.94
TURBOT				3.34	5.81	1.22	3.79	1.74	7.42	8.13			31.45
OTHER FLAT.		3.50	3.63	2.16	7.87	1.61	3.92	11.73	3.82	4.85	.22		43.31
PACIFIC COD	.50	470.39	78.08	165.41	443.14	182.45	48.07	66.78	76.35	80.91	26.38	7.43	1645.89
LINGCOD		.44	.45	.16	40.40	133.22	123.42	93.41	87.15	73.18	13.50		565.33
SABLEFISH		1.21	2.47	27.13	7.62	36.10	43.35	115.85	82.34	45.86	9.13	.26	371.32
POLLOCK						.20		.08	2.46				2.74
HAKE		38.74			82.22	199.41	15.53	46.10	186.39	25.12			593.51
OCEAN PERCH	6.04	18.83	5.39	29.54	4.41	20.88	19.42	42.14	16.40	11.28	9.10	.85	184.28
OTHER ROCKF.	1.44	61.48	149.23	124.78	72.50	155.81	217.63	489.72	330.43	244.19	79.71	49.86	1976.78
MISC. SP.		.83	.54	1.96	1.56	2.07	2.33	1.03	.72	1.55	.11		12.70
DOGFISH		75.31	261.22	992.80	310.67			3.17					1643.17
ANIMAL FOOD REDUCTION		16.91	5.99	7.64		5.31	1.55	33.03	1.92	5.38			77.73
TOTAL	8.44	781.21	602.51	1488.36	1091.17	776.81	535.31	984.97	868.00	548.50	151.86	60.71	7897.85

TABLE 10. 1988 BRITISH COLUMBIA TRAWL LANDINGS (T) OF GROUNDFISH - INTERNATIONAL AREA 3D NORTHWEST COAST VANCOUVER ISLAND.

	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP	OCT	NOV	DEC	TOTAL
ENGLISH S.	.01	.13	.34	1.59	3.26	8.37	2.09	1.83	1.49	.65	.32	.03	20.11
ROCK S.		12.08	.07		5.74	7.46	.68	5.02	2.30		1.29	.25	34.89
PETRALE S.	12.89	65.45	56.78	41.26	15.95	35.21	16.18	10.94	11.39	5.79	3.50	.41	275.75
DOVER S.	.10	12.04	29.98	32.06	17.25	7.34	3.32	2.94	7.53	7.82	2.60	19.91	142.89
REX SOLE		.08		.06	.16	.87	.91		.06		.25		2.39
STARRY FLDR						.77			.24				1.01
TURBOT		.01		8.82		9.42	2.21	11.43		2.97	.28		35.14
OTHER FLAT.	.19	.77		.13	1.65	.79		.86	5.45	.91	.22	.03	11.00
PACIFIC COD	6.99	33.21	9.86	3.86	30.46	10.48	2.30	12.64	8.32	16.46	10.76	1.01	146.35
LINGCOD	1.10	1.41	.97	1.17	44.77	51.87	51.96	33.30	47.90	35.19	13.09	.10	282.83
SABLEFISH	.11	.40	.34	5.23	5.88	12.40	20.99	9.62	17.29	6.27	2.70	3.50	84.73
POLLOCK										.11			.11
HAKE													
OCEAN PERCH	119.31	19.89	6.14	103.68	162.54	128.00	1.59	13.21	19.53	20.72	14.88	5.56	615.05
OTHER ROCKF.	680.73	981.19	370.94	311.72	435.06	229.69	202.98	164.99	375.02	487.95	617.38	210.88	5068.53
MISC. SP.		.21	.19	.01	.24	.34	.13	.01		.02	.16		1.31
DOGFISH		2.92	7.78		6.50								17.20
ANIMAL FOOD													
REDUCTION	.25	1.29	.75	.25	13.12	15.58	10.91		1.79	14.99	.24	.81	59.98
TOTAL	821.68	1131.08	484.14	509.84	742.58	518.59	316.25	266.79	498.31	599.85	667.67	242.49	6799.27

TABLE 11. 1988 BRITISH COLUMBIA TRAWL LANDINGS (T) OF GROUNDFISH - INTERNATIONAL AREA 5A SOUTH QUEEN CHARLOTTE SOUND.

	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP	OCT	NOV	DEC	TOTAL
ENGLISH S.	.15	.77	.74	3.13	4.85	2.17	.15	.92	.45	1.43	1.27	.06	16.09
ROCK S.		.38		3.92	30.46	30.36	29.34	15.34	12.12	2.38	3.39		127.69
PETRALE S.	.02	.08	.15	3.72	5.54	6.94	13.69	11.69	9.33	5.61	8.59	.71	66.07
DOVER S.	.27	.02		.52	2.15	4.28	3.17	7.07	7.83	1.46	.66	5.57	33.00
REX SOLE	.02			1.31	.17								1.50
STARRY FLDR	.36		.40			.02					.07		.85
TURBOT		.48		1.20	38.94	59.57	.45	2.56	1.50	9.38	1.54		115.62
OTHER FLAT.	.68			.15	.53	2.51		4.00	1.25		.23	.15	9.50
PACIFIC COD	2.35	19.08	6.75	141.21	145.72	106.82	111.76	81.35	108.36	50.34	12.15	13.56	799.45
LINGCOD	1.37	.69	4.41	31.02	32.94	70.74	137.39	110.76	100.76	50.31	8.82	4.47	553.68
SABLEFISH	.18	.01	.04	.89	.15	.51	.19	1.42	1.77	1.31	.17	1.20	7.84
POLLOCK					.11							1.51	1.62
HAKE													
OCEAN PERCH	6.74	.41	8.67	29.31	71.44	296.96	53.06	18.10	15.43	34.92	14.49	14.53	564.06
OTHER ROCKF.	171.36	195.38	162.30	442.59	209.17	274.64	148.11	111.97	159.33	196.31	150.78	119.70	2341.64
MISC. SP.		.71	.03	5.59	2.27	.07	.12	.40	.65	.51	.44		10.79
DOGFISH		25.95	3.77	15.67	20.89					17.74	1.88		85.90
ANIMAL FOOD REDUCTION	1.12		.81	6.21		3.06		4.92		.61	.14		16.87
TOTAL	184.62	243.96	188.07	686.44	565.33	858.65	497.43	370.50	418.78	372.31	204.62	161.46	4752.17

TABLE 12. 1988 BRITISH COLUMBIA TRAWL LANDINGS (T) OF GROUNDFISH - INTERNATIONAL AREA 5B NORTH QUEEN CHARLOTTE SOUND.

	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP	OCT	NOV	DEC	TOTAL
ENGLISH S.	.03	.50		2.82	3.34	5.82	11.79	3.32	11.86	12.65	2.57	.12	54.82
ROCK S.	.01			.73	34.34	41.49	60.62	56.86	55.74	10.72	7.78	.13	268.42
PETRALE S.	12.64	1.55		10.19	5.24	16.87	19.51	12.04	12.99	5.88	3.71		100.62
DOVER S.	2.73	13.36		13.82	2.26	13.46	9.96	3.66	5.63	9.44	5.69	.95	80.96
REX SOLE									2.87	.25			3.12
STARRY FLDR													
TURBOT		.14		.66		.79	12.69	4.50	22.46	3.42	.23	4.23	49.12
OTHER FLAT.					.55	3.71	.06	1.62	.24				6.18
PACIFIC COD	3.62	.20		44.48	77.96	317.82	109.72	104.43	239.97	110.70	39.92	.81	1049.63
LINGCOD	1.42	.87	.07	11.83	74.09	198.12	194.29	145.53	77.97	20.75	10.07	2.38	737.39
SABLEFISH	.31	.75		5.23	5.68	5.14	2.66	3.35	2.12	11.39	1.23	.37	38.23
POLLOCK				.13	.61	.65	.12	.05	.31	.01	.23		2.11
HAKE													
OCEAN PERCH	191.47	212.48	47.42	546.02	345.28	197.68	390.81	145.24	109.96	726.61	99.00	6.89	3018.41
OTHER ROCKF.	91.02	85.39	99.34	808.01	1605.47	1097.64	638.80	329.14	285.41	373.48	245.65	87.16	5746.51
MISC. SP.	.10	.03	.16	.82	9.80	3.53	.50	3.01	1.22	1.59	.62	.04	21.42
DOGFISH													
ANIMAL FOOD			1.49	1.34	.35		1.11						4.29
REDUCTION	10.22	1.93		9.30	110.82	5.73	18.13	8.66	18.00	15.06	6.21		204.06
TOTAL	313.57	317.20	148.48	1455.38	2275.79	1908.45	1470.77	821.41	846.75	1301.50	422.91	103.08	11385.29

TABLE 13. 1988 BRITISH COLUMBIA TRAWL LANDINGS (T) OF GROUNDFISH - INTERNATIONAL AREA 5C SOUTH HECATE STRAIT.

	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP	OCT	NOV	DEC	TOTAL
ENGLISH S.	.91	6.25	5.64	4.46	4.52	6.58	3.43	4.61	29.12	11.83	7.70	1.11	86.16
ROCK S.	1.28	1.78	11.97	16.94	60.16	10.24	7.74	15.32	36.54	14.33	12.61	.38	189.29
PETRALE S.	.45	1.94	.51	8.70	7.83	22.72	6.98	2.05	18.22	9.37	12.44	1.13	92.34
DOVER S.	.01	.02	.29	1.63	1.71	1.33	2.88	.92	1.50	.20	.93		11.42
REX SOLE		.57	.53		.38	.24	.18		.81	.29	1.38	.23	4.61
STARRY FLDR									.49				.49
TURBOT		.02			.02	2.31							2.35
OTHER FLAT.			.04		.18								.22
PACIFIC COD	177.49	662.80	278.47	433.59	132.57	255.05	115.33	17.15	93.75	43.92	88.29	17.46	2315.87
LINGCOD	2.41	4.41	3.32	8.90	12.18	68.37	24.63	7.79	14.42	10.31	9.41	.42	166.57
SABLEFISH				.13	.32	.31	.16	.78	6.82	.42	.62		9.56
POLLOCK					.01					.47			.48
HAKE													
OCEAN PERCH	7.34	2.76	13.99	174.71	69.64	74.81	105.23	8.53	54.69	127.65	74.21	.66	714.22
OTHER ROCKF.	51.26	57.38	54.01	158.28	89.49	103.03	83.70	30.00	92.48	103.48	66.17	20.71	909.99
MISC. SP.	1.02	1.33	.87	1.79	.75	5.11	7.25	.55	.80	.91	1.28		21.66
DOGFISH				.99	.52								1.51
ANIMAL FOOD					2.65	1.50	20.71	.34	.37				25.57
REDUCTION		19.43		1.60		1.18	7.70	4.69	2.31	.63	.09		37.63
TOTAL	242.17	758.69	369.64	811.72	382.93	552.78	385.92	92.73	352.32	323.81	275.13	42.10	4589.94

TABLE 14. 1988 BRITISH COLUMBIA TRAWL LANDINGS (T) OF GROUNDFISH - INTERNATIONAL AREA 5D NORTH HECATE STRAIT

	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP	OCT	NOV	DEC	TOTAL
ENGLISH S.	32.20	79.34	56.47	74.37	44.39	55.85	31.10	82.85	56.43	61.06	22.08	5.65	601.79
ROCK S.	9.13	10.14	28.63	111.65	134.32	299.96	195.58	85.95	121.09	147.77	48.94	16.03	1209.19
PETRALE S.	3.95	1.84	4.13	2.58	2.00	3.33	.26	2.14	2.57	9.07	7.39	1.96	41.22
DOVER S.	.73	.16	.07	1.05	10.81	52.79	44.76	149.65	131.77	100.41	20.50	2.71	515.41
REX SOLE	1.21	3.11	1.29	1.00	2.08	8.72	7.11	21.74	35.25	28.10	4.95	3.41	117.97
STARRY FLDR	5.57	1.12	.14	1.20	5.19	1.54	1.62	7.08	9.45	9.35	5.20	1.26	48.72
TURBOT	.60	11.06	4.72	9.82	19.66	68.06		.73		1.37	2.59	.01	118.62
OTHER FLAT.	1.02	.11	.14	1.47	.10	.16	.04		.92	.04	.03		4.03
PACIFIC COD	317.91	642.85	649.87	774.30	383.92	264.55	66.48	207.81	210.91	139.66	64.02	78.54	3800.82
LINGCOD	5.32	7.28	6.05	21.55	14.35	30.59	11.26	32.96	22.94	14.52	7.29	8.51	182.62
SABLEFISH	.01			.10	.19	1.78	1.62	4.72	2.39	1.07	1.04		12.92
POLLOCK	.44	1.14								.42	2.82	4.50	9.32
HAKE													
OCEAN PERCH				.76	2.66	.32		1.39	.17	.54	.19		6.03
OTHER ROCKF.	.69	2.65	4.50	47.35	15.28	5.77	2.40	3.17	29.24	10.30	4.03	10.16	135.54
MISC. SP.	12.08	26.27	9.92	19.49	16.04	16.29	15.41	16.03	20.67	15.49	4.33	.65	172.67
DOGFISH	.03												.03
ANIMAL FOOD	1.16	1.89	3.79	1.56	1.48	19.67	3.71	12.17	4.34	.76			50.53
REDUCTION						70.49				4.93	2.58		78.00
TOTAL	392.05	788.96	769.72	1068.25	652.47	899.87	381.35	628.39	648.14	544.86	197.98	133.39	7105.43

TABLE 15. 1988 BRITISH COLUMBIA TRAWL LANDINGS (T) OF GROUNDFISH - INTERNATIONAL AREA 5E WEST COAST QUEEN CHARLOTTE ISLANDS.

	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP	OCT	NOV	DEC	TOTAL
ENGLISH S.			3.25			.13	1.07						4.45
ROCK S.				.90									.90
PETRALE S.	1.68	5.72	7.46	4.71	1.49	1.00	1.43			.13	1.66	5.12	30.40
DOVER S.	18.79	16.37	28.88	22.09	12.62	11.87	.72			.07	3.20	2.28	116.89
REX SOLE	.18	.05	.33	.53	2.91	.76	1.43			.61	.62		7.42
STARRY FLDR													
TURBOT	2.09	3.45	6.97	2.13	.80		2.86						18.30
OTHER FLAT.												2.71	2.71
PACIFIC COD	.48	3.14	1.80	1.55	3.72	5.16		.04		.21	.19	.71	17.00
LINGCOD	1.54	.66	1.81	1.14	2.18	6.24	3.94	.05		.70	1.33	.06	19.65
SABLEFISH	5.39	13.02	33.35	5.22	11.35	4.92	2.15	1.53	1.35	4.98	17.34	10.04	110.64
POLLOCK		.04											.04
HAKE													
OCEAN PERCH	96.05	186.53	226.10	243.34	377.97	87.77	33.17	95.94	18.13	90.66	245.77	124.78	1826.21
OTHER ROCKF.	159.55	430.42	298.93	123.61	298.42	134.58	155.87	57.93	125.35	300.11	316.62	195.25	2596.64
MISC. SP.	.01	.06	.53	.30		.04							.94
DOGFISH													
ANIMAL FOOD	5.86	5.10	9.98	6.40	11.84	5.67							44.85
REDUCTION					20.18	28.52				3.91	52.76		105.37
TOTAL	291.62	664.56	619.39	411.92	743.48	286.66	202.64	155.49	144.83	401.38	639.49	340.95	4902.41

Tables of monthly catch (t) by minor area

TABLE 16. 1988 BRITISH COLUMBIA TRAWL LANDINGS (T) OF GROUNDFISH FROM STATISTICAL AREA 12.

	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP	OCT	NOV	DEC	TOTAL
ENGLISH S.	.76												.76
ROCK SOLE	.09										1.08		1.17
PETRALE S.													
DOVER SOLE													
REX SOLE													
BUTTER SOLE													
FLATHEAD S.													
SAND SOLE	5.49	2.25	4.86										12.60
TURBOT													
STAR.FLDR	4.95	.64	.85										6.44
OTHER FLAT.	5.59												5.59
PACIFIC COD	7.54		.27									.04	7.85
LINGCOD	.03												.03
SABLEFISH													
POLLOCK													
OCEAN PERCH													
BOCACCIO													
CANARY RF													
REDSTR. RF													
ROUGHEYE RF													
SIL'GRAY RF													
YEL'MOUTH R													
YEL'TAIL RF													
WIDOW RF													
OTHER RF	.08												.08
HAKE													
OCTOPUS	.02												.02
PERCH													
SKATE	1.21	.11	.75								.01		2.08
SQUID													
STURGEON													
MISC. SP.													
DOGFISH													
REDUCTION													
ANIMALFOOD													
TOTAL	25.76	3.00	6.73								1.09	.04	36.62
DISCARDS	3.76												3.76

TABLE 17. 1988 BRITISH COLUMBIA TRAWL LANDINGS (T) OF GROUNDFISH FROM STATISTICAL AREA 13.

	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP	OCT	NOV	DEC	TOTAL
ENGLISH S.													
ROCK SOLE			.22										.22
PETRALE S.													
DOVER SOLE													
REX SOLE													
BUTTER SOLE													
FLATHEAD S.			.05										.05
SAND SOLE			.07										.07
TURBOT													
STAR.FLDR			13.41										13.41
OTHER FLAT.													
PACIFIC COD		6.94										.39	7.33
LINGCOD													
SABLEFISH													
POLLOCK													
OCEAN PERCH													
BOCACCIO													
CANARY RF													
REDSTR. RF													
ROUGHEYE RF													
SIL'GRAY RF													
YEL'MOUTH R													
YEL'TAIL RF													
WIDOW RF													
OTHER RF													
HAKE													
OCTOPUS													
PERCH													
SKATE			.21										.21
SQUID													
STURGEON													
MISC. SP.													
DOGFISH													
REDUCTION													
ANIMALFOOD													
TOTAL		6.94	13.96									.39	21.29
DISCARDS												10.89	10.89

TABLE 18. 1988 BRITISH COLUMBIA TRAWL LANDINGS (T) OF GROUNDFISH FROM STATISTICAL AREA 14.

	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP	OCT	NOV	DEC	TOTAL
ENGLISH S.	.45	.89	.03								.32	1.04	2.73
ROCK SOLE	.75	.24	.19								.09		1.27
PETRALE S.						.02							.02
DOVER SOLE													
REX SOLE													
BUTTER SOLE													
FLATHEAD S.													
SAND SOLE													
TURBOT													
STAR.FLDR			.01					.05					.06
OTHER FLAT.	1.77	1.36	.08		.18	.03		.11			.19	.23	3.95
PACIFIC COD	14.64	6.21	25.88		12.42	21.15	.23	7.76		.26	3.70	3.41	95.66
LINGCOD					.02	.06		.01					.09
SABLEFISH					.02	.11		.04					.17
POLLOCK									1.36				1.36
OCEAN PERCH													
BOCACCIO													
CANARY RF													
REDSTR. RF													
ROUGHEYE RF													
SIL'GRAY RF													
YEL'MOUTH R													
YEL'TAIL RF					.05								.05
WIDOW RF													
OTHER RF			.04			.02							.06
HAKE									3.18				3.18
OCTOPUS	.01					.02							.03
PERCH	.08	.09	.24										.41
SKATE	.03	.03	.04		.02	.02		.01			.01		.16
SQUID													
STURGEON													
MISC. SP.													
DOGFISH		.21			13.57	27.73	9.12	7.83					58.46
REDUCTION													
ANIMALFOOD													
TOTAL	17.73	9.03	26.51		26.28	49.16	9.35	15.81	4.54	.26	4.31	4.68	167.66
DISCARDS	.73		1.09		13.34	6.58	2.72	2.04					26.50

TABLE 19. 1988 BRITISH COLUMBIA TRAWL LANDINGS (T) OF GROUNDFISH FROM STATISTICAL AREA 15.

	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP	OCT	NOV	DEC	TOTAL
ENGLISH S.													
ROCK SOLE													
PETRALE S.													
DOVER SOLE													
REX SOLE													
BUTTER SOLE													
FLATHEAD S.													
SAND SOLE													
TURBOT													
STAR.FLDR			14.69	12.71	5.73								
OTHER FLAT.													33.13
PACIFIC COD					.02								
LINGCOD													.02
SABLEFISH													
POLLOCK													
OCEAN PERCH													
BOCACCIO													
CANARY RF													
REDSTR. RF													
ROUGHEYE RF													
SIL'GRAY RF													
YEL'MOUTH R													
YEL'TAIL RF													
WIDOW RF													
OTHER RF					.02								.02
HAKE													
OCTOPUS													
PERCH													
SKATE													
SQUID													
STURGEON													
MISC. SP.													
DOGFISH													
REDUCTION													
ANIMALFOOD													
TOTAL			14.69	12.71	5.77								33.17
DISCARDS			.18	.54	.54								1.26

TABLE 20. 1988 BRITISH COLUMBIA TRAWL LANDINGS (T) OF GROUNDFISH FROM STATISTICAL AREA 16.

	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP	OCT	NOV	DEC	TOTAL
ENGLISH S.													
ROCK SOLE													
PETRALE S.													
DOVER SOLE													
REX SOLE													
BUTTER SOLE													
FLATHEAD S.													
SAND SOLE													
TURBOT													
STAR.FLDR													
OTHER FLAT.													
PACIFIC COD													
LINGCOD													
SABLEFISH													
POLLOCK	37.08	76.20									6.80	22.40	142.48
OCEAN PERCH													
BOCACCIO													
CANARY RF													
REDSTR. RF													
ROUGHEYE RF													
SIL'GRAY RF													
YEL'MOUTH R													
YEL'TAIL RF													
WIDOW RF													
OTHER RF													
HAKE	99.12	37.25									11.34	50.78	198.49
OCTOPUS													
PERCH													
SKATE													
SQUID													
STURGEON													
MISC. SP.													
DOGFISH													
REDUCTION													
ANIMALFOOD													
TOTAL	136.20	113.45									18.14	73.18	340.97
DISCARDS													

TABLE 21. 1988 BRITISH COLUMBIA TRAWL LANDINGS (T) OF GROUNDFISH FROM STATISTICAL AREA 17.

	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP	OCT	NOV	DEC	TOTAL
ENGLISH S.		.58									2.86	1.97	5.41
ROCK SOLE	.09										.05	.99	1.13
PETRALE S.													
DOVER SOLE													
REX SOLE													
BUTTER SOLE													
FLATHEAD S.													
SAND SOLE													
TURBOT													
STAR.FLDR		.18									.48	.32	.98
OTHER FLAT.	2.74	2.08	.83	.76	.16						1.16	1.63	9.36
PACIFIC COD	1.14	3.35	.89	.34	.09						2.17	2.95	10.93
LINGCOD												.09	.09
SABLEFISH													
POLLOCK		457.97	117.84									.12	575.93
OCEAN PERCH													
BOCACCIO													
CANARY RF													
REDSTR. RF													
ROUGHEYE RF													
SIL'GRAY RF													
YEL'MOUTH R													
YEL'TAIL RF													
WIDOW RF													
OTHER RF		.02			.08						.23	.45	.78
HAKE		421.73	219.10	67.99									708.82
OCTOPUS		.04		.02									.06
PERCH												.12	.12
SKATE		.04									.19	.42	.65
SQUID													
STURGEON													
MISC. SP.													
DOGFISH		19.05	5.44	.14							.42		25.05
REDUCTION													
ANIMALFOOD													
TOTAL	3.97	905.04	344.10	69.25	.33						7.56	9.06	1339.31
DISCARDS											2.81	7.58	10.39

TABLE 22. 1988 BRITISH COLUMBIA TRAWL LANDINGS (T) OF GROUNDFISH FROM STATISTICAL AREA 18.

	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP	OCT	NOV	DEC	TOTAL
ENGLISH S.	.16	.30	.21	.54					2.51	1.11	1.41	4.48	10.72
ROCK SOLE	.01	.01	.32							.02	.09	1.32	1.77
PETRALE S.													
DOVER SOLE											.10		.10
REX SOLE													
BUTTER SOLE													
FLATHEAD S.													
SAND SOLE													
TURBOT													
STAR.FLDR		.07		.13	.04	.02							.26
OTHER FLAT.	.44	3.20	.86		1.03	1.44			.44	3.30	4.36	1.45	16.52
PACIFIC COD	26.52	16.55	9.34	10.48	5.25	.92			8.54	5.15	10.23	10.85	103.83
LINGCOD						.05			.12	.28	.58		1.03
SABLEFISH									.01				.01
POLLOCK	1.68	1.81											3.49
OCEAN PERCH													
BOCACCIO													
CANARY RF													
REDSTR. RF													
ROUGHEYE RF													
SIL'GRAY RF													
YEL'MOUTH R													
YEL'TAIL RF											.02		.02
WIDOW RF													
OTHER RF	.06	.13	.11	.01	.03	.02			.07	.02	.29	.21	.95
HAKE													
OCTOPUS	.34	.13	.02						.11	.04	.11	.07	.82
PERCH												.01	.01
SKATE	.14	.46	.14	.51	.03	.38			.36	.38	.23	.33	2.96
SQUID													
STURGEON													
MISC. SP.													
DOGFISH	1.65	3.83	.33		1.14	1.41		6.50	6.83	6.69	8.15		36.53
REDUCTION													
ANIMALFOOD													
TOTAL	31.00	26.49	11.33	11.67	7.52	4.24		6.50	18.99	16.99	25.57	18.72	179.02
DISCARDS	.91	.23			.18			2.95	3.18	.45			7.90

TABLE 23. 1988 BRITISH COLUMBIA TRAWL LANDINGS (T) OF GROUNDFISH FROM STATISTICAL AREA 19.

	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP	OCT	NOV	DEC	TOTAL
ENGLISH S.	.09	.46	.57	.32			.11	.12		2.39	.35	.15	4.56
ROCK SOLE											.02		.02
PETRALE S.										.04		.01	.05
DOVER SOLE													
REX SOLE													
BUTTER SOLE													
FLATHEAD S.													
SAND SOLE													
TURBOT	.17	.03	.03					.21	.11	.08	1.74	1.35	3.72
STAR.FLDR													
OTHER FLAT.	.35	.77	.19	.06	.01		.10	.19	.31	.40	.15	.14	2.67
PACIFIC COD	177.80	68.72	38.07	7.77	.10		26.55	83.82	108.22	127.22	149.17	168.05	955.49
LINGCOD					.01		.14	.59	1.04	3.80	2.61		8.19
SABLEFISH	.03	.04								.13	.28	.51	.99
POLLOCK	.71											1.22	1.93
OCEAN PERCH													
BOCACCIO													
CANARY RF												.01	.01
REDSTR. RF													
ROUGHEYE RF													
SIL'GRAY RF	.04									.20			.24
YEL'MOUTH R													
YEL'TAIL RF		.05								.04	.02	.05	.16
WIDOW RF													
OTHER RF	.06	.05	.01	.01					.05	.05	.05	.22	.50
HAKE													
OCTOPUS	.07	.01	.09	.02			.08	.15	.18	.48	.51	.23	1.82
PERCH													
SKATE	.85	.58	.31	.18			.11	.34	.39	.83	.63	1.35	5.57
SQUID													
STURGEON													
MISC. SP.		.03									.01	.02	.06
DOGFISH	24.60	10.38									4.64	11.83	51.45
REDUCTION	.10	.07					.35			.20			.72
ANIMALFOOD													
TOTAL	204.87	81.19	39.27	8.36	.12		27.44	85.42	110.30	135.86	160.18	185.14	1038.15
DISCARDS	2.01	.98					4.54	2.00	.68	12.66	4.08	2.93	29.88

TABLE 24. 1988 BRITISH COLUMBIA TRAWL LANDINGS (T) OF GROUNDFISH FROM STATISTICAL AREA 20.

	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP	OCT	NOV	DEC	TOTAL
ENGLISH S.	.17				2.53		1.29	.82	2.68	.88	.04	.03	8.44
ROCK SOLE					.47								.47
PETRALE S.					3.41								3.41
DOVER SOLE					2.26	.25	4.59	2.69	.68				10.47
REX SOLE					.07		.01						.08
BUTTER SOLE													
FLATHEAD S.													
SAND SOLE													
TURBOT				.18	.17	.14	.36						.85
STAR.FLDR					.01								.01
OTHER FLAT.				5.46	4.48	2.45	.34	.21		1.31			14.25
PACIFIC COD	.12		.03	4.84	10.64	1.96	2.17	.82	3.31	2.14	6.88	7.94	40.85
LINGCOD					1.22	1.88	.27	.17		.03	.01		3.58
SABLEFISH					.07	.02	.07	.03			.01	.03	.23
POLLOCK													
OCEAN PERCH													
BOCACCIO													
CANARY RF													
REDSTR. RF													
ROUGHEYE RF													
SIL'GRAY RF													
YEL'MOUTH R													
YEL'TAIL RF				.75	4.51	1.02	.04	.01	.18				6.51
WIDOW RF													
OTHER RF					.18						.01	.02	.21
HAKE									185.50				185.50
OCTOPUS				.12	.12	.02	.01			.01		.04	.32
PERCH													
SKATE				.57	.25	.04	.05		.45	.03	.08	.07	1.54
SQUID													
STURGEON													
MISC. SP.					.03		.01						.04
DOGFISH													
REDUCTION					.40								.40
ANIMALFOOD													
TOTAL	.29		.03	11.92	30.82	7.78	9.21	4.75	192.80	4.40	7.03	8.13	277.16
DISCARDS		1.81			.91		17.55	6.28				.45	27.00

TABLE 25. 1988 BRITISH COLUMBIA TRAWL LANDINGS (T) OF GROUNDFISH FROM STATISTICAL AREA 29.

	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP	OCT	NOV	DEC	TOTAL
ENGLISH S.													
ROCK SOLE													
PETRALE S.													
DOVER SOLE													
REX SOLE													
BUTTER SOLE													
FLATHEAD S.													
SAND SOLE													
TURBOT													
STAR.FLDR											.03	.02	.05
OTHER FLAT.											.18	1.25	1.43
PACIFIC COD											.05	.15	.20
LINGCOD													
SABLEFISH													
POLLOCK		188.02	181.60										369.62
OCEAN PERCH													
BOCACCIO													
CANARY RF													
REDSTR. RF													
ROUGHEYE RF													
SIL'GRAY RF													
YEL'MOUTH R													
YEL'TAIL RF													
WIDOW RF													
OTHER RF											.09	.03	.12
HAKE		348.53	2441.53	1539.75	34.64						.01	.03	4364.49
OCTOPUS													
PERCH													
SKATE											.07	.32	.39
SQUID													
STURGEON													
MISC. SP.													
DOGFISH		2.72	22.22	23.10								1.09	49.13
REDUCTION													
ANIMALFOOD													
TOTAL		539.27	2645.35	1562.85	34.64						.43	2.89	4785.43

TABLE 26. 1988 BRITISH COLUMBIA TRAWL LANDINGS (T) OF GROUNDFISH FROM STATISTICAL AREA 21.

	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP	OCT	NOV	DEC	TOTAL
ENGLISH S.				.63	2.73		1.36	1.42		.46	.35	.26	7.21
ROCK SOLE			.37	1.18	2.96			.95					5.46
PETRALE S.					14.79	3.50		.77	.92	1.79	.57		22.34
DOVER SOLE				.76	.81	.46		.84		1.09	.24	.05	4.25
REX SOLE													
BUTTER SOLE													
FLATHEAD S.													
SAND SOLE				1.52				.27	3.83	7.48			13.10
TURBOT				.01									.01
STAR.FLDR													
OTHER FLAT.		.66		.18	2.26	.63							3.73
PACIFIC COD		46.06	.32	52.57	278.59	6.63	1.30	3.53	.54	5.69	.47	1.03	396.73
LINGCOD					7.63	2.04	.05	3.36	.58	13.68	9.46		36.80
SABLEFISH				.06	.62	.85	.15	66.65	9.97	4.14	3.42		85.86
POLLOCK								.08					.08
OCEAN PERCH				6.97	1.95	1.71	.48	6.77		1.51	5.16		24.55
BOCACCIO					.06			46.61	6.66	60.40	27.58		141.31
CANARY RF					.29	.57		84.63	11.25	26.27	11.59		134.60
REDSTR. RF				1.59	1.28		14.87	20.35		3.39	11.40		52.88
ROUGHEYE RF						.29		.96			.04		1.29
SIL'GRAY RF				.52				28.09	3.17	10.05	3.15		44.98
YEL'MOUTH R							.69			.65			1.34
YEL'TAIL RF				.59	3.89	11.91		19.05	1.08	2.35	2.02		40.89
WIDOW RF													
OTHER RF				1.55	6.48	.48	.04	.82	.11	1.55			11.03
HAKE									90.97	25.12			116.09
OCTOPUS					.07								.07
PERCH													
SKATE				.04	.25								.29
SQUID													
STURGEON					.11								.11
MISC. SP.													
DOGFISH		.49	.24		3.95								4.68
REDUCTION						.07		4.32		5.38			9.77
ANIMALFOOD													
TOTAL		47.21	.93	68.17	328.72	29.14	18.94	289.47	129.08	171.00	75.45	1.34	1159.45
DISCARDS					45.59		4.54	1.59	21.18	15.20	14.09		102.19

TABLE 27. 1988 BRITISH COLUMBIA TRAWL LANDINGS (T) OF GROUNDFISH FROM STATISTICAL AREA 23.

	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP	OCT	NOV	DEC	TOTAL
ENGLISH S.		3.87	1.98	2.35	3.58	4.66	7.08	4.84	5.11	5.20	3.65	.11	42.43
ROCK SOLE		5.89	5.50	8.69	6.87	11.85	3.53	23.52	13.34	15.07	1.21		95.47
PETRALE S.	.09	12.26	15.39	5.36	7.04	9.77	8.76	15.45	17.25	16.19	.65	1.14	109.35
DOVER SOLE		38.24	39.47	99.30	44.15	3.28	10.69	4.75	14.52	5.35	3.78		263.53
REX SOLE			.07	.32	.18	.55							1.12
BUTTER SOLE													
FLATHEAD S.													
SAND SOLE													
TURBOT				1.40		.40	1.35	1.47	3.59				8.21
STAR.FLDR			.46					.57	.05				1.08
OTHER FLAT.		2.60	2.01	1.78	1.64	.98	2.07	1.44	2.09	.82			15.43
PACIFIC COD		388.85	69.21	109.78	64.25	158.79	35.30	53.63	59.81	71.40	20.01	5.98	1037.01
LINGCOD		.44		.16	15.08	128.81	80.13	65.38	61.02	49.64	1.72		402.38
SABLEFISH		1.21	.17	24.91	4.33	29.26	39.37	41.61	70.92	38.23	5.57	.03	255.61
POLLOCK						.20			2.46				2.66
OCEAN PERCH	5.23	16.85	4.81	22.29	2.46	15.89	5.34	30.18	7.74	5.87	1.02	.23	117.91
BOCACCIO		.56		1.63	.22	1.75	.15	11.80	60.10	11.47	1.96		89.64
CANARY RF		1.25	1.56	4.71	.39	20.79	15.26	72.50	59.50	7.30	4.30	2.15	189.71
REDSTR. RF		1.48	23.76	57.58	4.34	14.04	4.97	30.93	4.57	6.74		27.78	176.19
ROUGHEYE RF		5.26	3.16	2.81	2.79	.22			.04	.61	.58		15.47
SIL'GRAY RF	.10	.48	2.35	12.32	4.96	10.34	5.54	67.18	40.66	10.08	8.19	.84	163.04
YEL'MOUTH R				.30		1.00	.59	1.86	.10	.33			4.18
YEL'TAIL RF	.42	10.44	5.84	2.73	.67	13.09	.12	36.92	14.11	8.35		.38	93.07
WIDOW RF			1.17	1.46	.05	3.01		.60	.33				6.62
OTHER RF		11.09	3.51	27.18	8.27	4.00	2.53	1.00	8.22	2.15	3.07	5.58	76.60
HAKE		38.74			82.22	199.41	15.53	46.10	95.42				477.42
OCTOPUS		.03		.02	.04	.01	.01	.19	.07	.08			.45
PERCH		.01											.01
SKATE		.58	.40	1.66	.32	1.67	.99	.62	.55	1.21			8.00
SQUID													
STURGEON				.06	.04	.03							.13
MISC. SP.									.07	.12			.19
DOGFISH		64.86	194.25	887.45	279.50			2.72					1428.78
REDUCTION		16.82	5.99	7.64		5.22	1.55	28.71	1.92				67.85
ANIMALFOOD													
TOTAL	5.84	621.81	381.06	1283.89	533.39	639.02	240.86	543.97	543.56	256.21	55.71	44.22	5149.54
DISCARDS		19.73	35.93	34.97	103.38	37.97	104.87	168.78	109.09	75.75	10.07	.11	700.65

TABLE 28. 1988 BRITISH COLUMBIA TRAWL LANDINGS (T) OF GROUNDFISH FROM STATISTICAL AREA 24.

	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP	OCT	NOV	DEC	TOTAL
ENGLISH S.		1.42	2.30	2.75	2.15	.47	1.79	.64	1.07	.15	.32		13.06
ROCK SOLE			4.40	1.71	5.37	1.62	1.12	1.76	6.36	.57	.08		22.99
PETRALE S.	.37	24.33	2.53	1.82	1.25	.51	2.19	4.05	6.88	1.19	2.62	.75	48.49
DOVER SOLE		.75	20.13	7.38	23.09	1.86	19.78	20.63	7.10	.99	.24		101.95
REX SOLE		6.80	.25										7.05
BUTTER SOLE													
FLATHEAD S.													
SAND SOLE			.18	.08	.16								.42
TURBOT				.42	5.81	.82	2.44			.65			10.14
STAR.FLDR		.01	2.66	1.18									3.85
OTHER FLAT.		.24	1.44	.12	3.81		1.85	10.29	1.73	4.03	.22		23.73
PACIFIC COD	.50	35.48	8.55	3.06	100.30	17.03	11.46	9.62	16.01	3.83	5.90	.41	212.15
LINGCOD			.45		17.69	2.37	43.23	24.67	25.55	9.87	2.32		126.15
SABLEFISH			2.30	2.16	2.67	5.99	3.83	7.59	1.45	3.49	.14	.23	29.85
POLLOCK													
OCEAN PERCH	.81	1.98	.58	.28		3.27	13.60	5.19	8.67	3.90	2.92	.62	41.82
BOCACCIO			.39	2.31	2.17	7.72	12.41	4.40	6.89	21.69			57.98
CANARY RF	.10		8.36	1.20	22.32	4.46	37.23	15.87	41.87	22.18	1.29	.93	155.81
REDSTR. RF		.22	10.63	1.23	10.51	24.71	24.95	1.76	10.02	10.82	4.40		99.25
ROUGHEYE RF	.08	.58	1.24	2.02	2.01	3.47	1.53			.48			11.41
SIL'GRAY RF	.02		30.63		.97	6.31	31.21	36.68	46.97	34.02		2.71	189.52
YEL'MOUTH R	.02				.06		.49	.46					1.03
YEL'TAIL RF	.59	27.88	47.30	2.42	.50	7.63	39.12	7.22	9.05	3.24		.54	145.49
WIDOW RF		1.33	7.31		.22	5.48	6.65		.11	.07			21.17
OTHER RF	.11	.91	2.02	.63	.05	14.54	19.28	.03	5.62		.14	8.95	52.28
HAKE													
OCTOPUS		.06	.04	.03	.04		.02	.02	.02	.06	.11		.40
PERCH													
SKATE		.15	.10	.16	.61	.36	1.32	.20		.08			2.98
SQUID													
STURGEON					.07								.07
MISC. SP.													
DOGFISH		9.96	66.73	105.35	27.22			.45					209.71
REDUCTION		.09				.02							.11
ANIMALFOOD													
TOTAL	2.60	112.19	220.52	136.31	229.05	108.64	275.50	151.53	195.37	121.31	20.70	15.14	1588.86
DISCARDS	1.36	11.16	8.53	8.39	29.48	15.88	28.80	14.17	8.62	2.49			128.88

TABLE 29. 1988 BRITISH COLUMBIA TRAWL LANDINGS (T) OF GROUNDFISH FROM STATISTICAL AREA 25.

	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP	OCT	NOV	DEC	TOTAL
ENGLISH S.	.01	.04	.18	1.48	2.87	7.63	1.72	1.83	.64	.65		.03	17.08
ROCK SOLE		11.98	.03		.10	.56	.23	.10	.51			.25	13.76
PETRALE S.	11.47	63.32	55.88	40.57	13.20	32.32	11.67	9.45	8.03	4.45	1.84	.41	252.61
DOVER SOLE	.04	12.02	29.98	31.41	16.84	6.94	.64	1.71	2.38	6.17	1.21	19.90	129.24
REX SOLE				.06		.75	.91						1.72
BUTTER SOLE													
FLATHEAD S.													
SAND SOLE													
TURBOT		.01		8.75		2.37	2.21	11.43		1.91			26.68
STAR.FLDR						.48							.48
OTHER FLAT.	.19	.75		.13	1.19	.79			3.08	.34	.21		6.68
PACIFIC COD	4.61	2.44	.98	1.58	8.36	4.77	1.00	8.58	1.80	10.15	1.80	.91	46.98
LINGCOD	.16	.85	.58	1.17	23.77	22.05	19.20	6.90	17.79	22.40	7.51	.04	122.42
SABLEFISH		.35	.34	4.85	4.92	3.73	14.92	3.78	13.53	4.04	1.57	3.50	55.53
POLLOCK													
OCEAN PERCH	20.22	4.29	2.36	23.05	19.15	7.69	.66		10.82	16.48	13.34	5.14	123.20
BOCACCIO	9.13	2.83	.31	2.78	9.94	6.84	6.90	6.32	39.05	60.98	26.38	9.94	181.40
CANARY RF	22.62	8.91	8.10	29.93	34.28	26.71	29.45	13.89	42.19	41.65	53.34	10.36	321.43
REDSTR. RF	3.05	8.29	3.91	1.43	5.34	3.49	2.00	5.73	16.57	3.50	5.23	5.77	64.31
ROUGHEYE RF	2.64	3.35	2.56	.74	3.92	1.95	1.69		.02	.64	1.90	1.71	21.12
SIL'GRAY RF	13.63	8.98	14.19	18.66	17.50	18.71	27.48	25.57	81.02	53.43	38.28	13.34	330.79
YEL'MOUTH R	5.84	.64	.03		.06		.22			.80			7.59
YEL'TAIL RF	253.60	493.94	175.81	112.20	20.94	6.07	8.01	4.05	30.12	113.56	190.83	65.47	1474.60
WIDOW RF	65.36	105.22	63.28	24.06	3.00			3.32	1.86	39.13	110.08	52.02	467.33
OTHER RF	12.40	10.95	7.74	3.52	12.20	2.43	4.36	7.63	10.83	1.67	8.16	4.29	86.18
HAKE													
OCTOPUS										.02			.02
PERCH													
SKATE					.03	.21	.02						.26
SQUID													
STURGEON						.01							.01
MISC. SP.													
DOGFISH					2.27								2.27
REDUCTION	.25	1.29	.75	.25	.49				1.79	14.99		.81	20.62
ANIMALFOOD													
TOTAL	425.22	740.45	367.01	306.62	200.37	156.50	133.29	110.29	282.03	396.96	461.68	193.89	3774.31
DISCARDS	15.65	23.81	63.96	.82	14.61	12.02	6.80	2.49	23.13	14.38	2.94	.14	180.75

TABLE 30. 1988 BRITISH COLUMBIA TRAWL LANDINGS (T) OF GROUNDFISH FROM STATISTICAL AREA 26.

	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP	OCT	NOV	DEC	TOTAL
ENGLISH S.		.04	.14	.07	.20	.09	.37		.84		.02		1.77
ROCK SOLE		.10	.04		1.11	.31	.12		.07		.25		2.00
PETRALE S.	.07	.73	.51	.69	.74	.74	3.63	.03	2.94	1.34	1.01		12.43
DOVER SOLE		.01		.11	.03	.40	2.18	.12	.87	.90	.07	.01	4.70
REX SOLE		.08				.12			.06				.26
BUTTER SOLE													
FLATHEAD S.													
SAND SOLE													
TURBOT						7.05				.21			7.26
STAR.FLDR													
OTHER FLAT.		.02						.06				.03	.11
PACIFIC COD	2.20	29.78	5.74	1.56	3.06	.78	.71	.68	1.03	1.93	2.79	.10	50.36
LINGCOD	.52		.39		1.30	6.64	26.48	3.25	6.56	10.54	2.56	.06	58.30
SABLEFISH	.02			.05	.04	.71	5.52	4.11	1.18	1.72	.07		13.42
POLLOCK										.11			.11
OCEAN PERCH	.97		.33	28.00	1.90	16.54	.75		1.59	.40	.27		50.75
BOCACCIO	1.61	2.57	.63	1.93	1.87	10.49	2.53	.84	2.06	14.92	2.65	2.40	44.50
CANARY RF	11.67	1.93	3.29	2.23	9.80	19.32	3.93	7.88	11.91	18.53	9.12	9.51	109.12
REDSTR. RF	9.05	2.23	.68	8.64	.24	43.16			2.14	4.21	4.60	1.75	76.70
ROUGHEYE RF							2.34	1.77	1.25				5.36
SIL'GRAY RF	21.02	25.57	6.35	32.53	32.38	8.87	3.86	8.00	20.89	33.89	12.69	19.42	225.47
YEL'MOUTH R			.21					.30		1.19	.55		2.25
YEL'TAIL RF	176.61	94.32	30.78	4.75	9.68	1.12	1.03	2.58	7.79	51.81	13.95	3.96	398.38
WIDOW RF		38.58	16.44					.55	3.17	14.32	51.71	1.85	126.62
OTHER RF	10.34	.02		.24	2.71	2.95	2.15	1.30	.57	.60			20.88
HAKE					.05								.05
OCTOPUS													
PERCH													.05
SKATE		.05											
SQUID											.05		.29
STURGEON		.16	.08										.11
MISC. SP.			.11										
DOGFISH		2.92	1.22		2.22								6.36
REDUCTION						15.58							15.58
ANIMALFOOD													
TOTAL	234.08	199.11	66.94	80.80	67.33	134.87	55.60	31.47	64.92	156.62	102.36	39.09	1233.19
DISCARDS			1.36		8.39	.45		1.59	3.18	24.99	4.54		44.50

TABLE 31. 1988 BRITISH COLUMBIA TRAWL LANDINGS (T) OF GROUNDFISH FROM STATISTICAL AREA 27.

	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP	OCT	NOV	DEC	TOTAL
ENGLISH S.		.05	.02	.04	.19	.65			.01		.30		1.26
ROCK SOLE					4.53	6.59	.33	4.92	1.72		1.04		19.13
PETRALE S.	1.35	1.40	.39		2.01	2.15	.88	1.46	.42		.65		10.71
DOVER SOLE	.06	.01		.54	.38		.50	1.11	4.28	.75	1.32		8.95
REX SOLE					.16						.25		.41
BUTTER SOLE													
FLATHEAD S.													
SAND SOLE													
TURBOT				.07						.85	.28		1.20
STAR.FLDR						.29			.24				.53
OTHER FLAT.					.46			.80	2.37	.57	.01		4.21
PACIFIC COD	.18	.99	3.14	.72	19.04	4.93	.59	3.38	5.49	4.38	6.17		49.01
LINGCOD	.42	.56			19.70	23.17	6.28	23.15	23.55	2.25	3.03		102.11
SABLEFISH	.09	.05		.33	.92	7.96	.55	1.73	2.58	.51	1.06		15.78
POLLOCK													
OCEAN PERCH	98.12	15.60	3.45	52.63	141.49	103.77	.18	13.21	7.12	3.85	1.26	.42	441.10
BOCACCIO		.31	.08	3.90	6.98	8.90	8.13	8.30	13.36	5.81	18.72	.20	74.69
CANARY RF		2.18	.34	.40	44.66	20.65	20.75	17.64	24.00	8.27	13.40	2.94	155.23
REDSTR. RF	15.85	62.04	16.23	22.99	16.83	11.69	40.92	1.57	3.86	3.17	13.54		208.69
ROUGHEYE RF					7.72	.33	.15	.91	7.23				16.34
SIL'GRAY RF	4.83	58.01	10.41	2.52	20.99	12.34	31.35	26.23	34.52	13.27	28.95		243.42
YEL'MOUTH R	26.64	16.45	5.21	36.03	50.10	9.31	1.34	2.88	3.73	.89	3.22	3.02	158.82
YEL'TAIL RF	8.14	15.75		1.21	90.84	6.34	2.01	15.79	13.87	1.63	7.70		163.28
WIDOW RF	5.42	10.83	1.77		31.45			.28					49.75
OTHER RF	1.28	7.29	2.59	1.03	1.63	8.02	2.38	1.66	3.01	.08	2.38	2.93	34.28
HAKE													
OCTOPUS					.01	.11	.09	.01			.12		.34
PERCH													
SKATE					.06								.06
SQUID													
STURGEON				.01	.09	.01	.01						.12
MISC. SP.													
DOGFISH			6.56		2.01								8.57
REDUCTION					12.63		10.91				.24		23.78
ANIMALFOOD													
TOTAL	162.38	191.52	50.19	122.42	474.88	227.21	127.35	125.03	151.36	46.28	103.64	9.51	1791.77
DISCARDS		3.18	.45		2.36			1.13	14.38	.91			22.41

TABLE 32. 1988 BRITISH COLUMBIA TRAWL LANDINGS (T) OF GROUNDFISH FROM STATISTICAL AREA 9.

	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP	OCT	NOV	DEC	TOTAL
ENGLISH S.						.32							.32
ROCK SOLE						.85							.85
PETRALE S.					1.96	1.87							3.83
DOVER SOLE													
REX SOLE													
BUTTER SOLE													
FLATHEAD S.													
SAND SOLE													
TURBOT													
STAR.FLDR													
OTHER FLAT.													
PACIFIC COD					.08	1.56							1.64
LINGCOD					.02								.02
SABLEFISH													
POLLOCK													
OCEAN PERCH					8.68	9.49							18.17
BOCACCIO													
CANARY RF													
REDSTR. RF													
ROUGHEYE RF													
SIL'GRAY RF													
YEL'MOUTH R													
YEL'TAIL RF						2.09							2.09
WIDOW RF													
OTHER RF													
HAKE													
OCTOPUS													
PERCH													
SKATE													
SQUID													
STURGEON													
MISC. SP.													
DOGFISH													
REDUCTION													
ANIMALFOOD													
TOTAL					10.74	16.18							26.92
DISCARDS													

TABLE 33. 1988 BRITISH COLUMBIA TRAWL LANDINGS (T) OF GROUNDFISH FROM STATISTICAL AREA 11.

	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP	OCT	NOV	DEC	TOTAL
ENGLISH S.	.15	.77	.74	3.13	4.85	2.17	.15	.92	.45	1.43	1.27	.06	16.09
ROCK SOLE		.38		3.92	30.46	30.04	29.34	15.34	12.12	2.38	3.39		127.37
PETRALE S.	.02	.08	.15	3.72	5.54	6.09	13.69	11.69	9.33	5.61	8.59	.71	65.22
DOVER SOLE	.27	.02		.52	.19	2.41	3.17	7.07	7.83	1.46	.66	5.57	29.17
REX SOLE	.02			1.31	.17								1.50
BUTTER SOLE													
FLATHEAD S.													
SAND SOLE													
TURBOT		.48		1.20	38.94	59.57	.45	2.56	1.50	9.38	1.54		115.62
STAR.FLDR	.36		.40			.02					.07		.85
OTHER FLAT.	.68			.15	.53	2.51		4.00	1.25		.23	.15	9.50
PACIFIC COD	2.35	19.08	6.75	141.21	145.64	105.26	111.76	81.35	108.36	50.34	12.15	13.56	797.81
LINGCOD	1.37	.69	4.41	31.02	32.94	70.74	137.39	110.76	100.76	50.31	8.82	4.47	553.68
SABLEFISH	.18	.01	.04	.89	.13	.51	.19	1.42	1.77	1.31	.17	1.20	7.82
POLLOCK					.11							1.51	1.62
OCEAN PERCH	6.74	.41	8.67	29.31	62.76	287.47	53.06	18.10	15.43	34.92	14.49	14.53	545.89
BOCACCIO	13.08	20.67	2.17	9.05	13.91	31.82	8.73	6.08	12.30	27.10	56.14	32.77	233.82
CANARY RF	18.59	4.87	3.06	7.12	29.02	30.97	25.69	13.39	11.97	20.31	8.91	14.67	188.57
REDSTR. RF	2.19	3.17	64.29	124.59	18.79	39.48	10.83	.61	12.47	6.47	3.01	9.31	295.21
ROUGHEYE RF		1.42		10.56	4.18	6.66	1.96	9.64	.27			1.41	36.10
SIL'GRAY RF	30.17	79.52	24.24	47.99	44.38	36.11	49.41	49.41	92.24	58.38	56.15	36.87	604.87
YEL'MOUTH R	76.75	11.96	9.58	164.07	26.72	37.89	10.17	6.30	1.70	5.03	4.04	5.05	359.26
YEL'TAIL RF	10.49	60.93	21.93	34.89	49.22	55.98	22.26	19.08	25.14	46.23	18.54	10.78	375.47
WIDOW RF	5.79	4.52	2.49	6.27	.71	2.33	1.94	5.77	.40	13.88	1.78	2.08	47.96
OTHER RF	14.30	8.32	34.54	38.05	22.24	31.31	17.12	1.69	2.84	18.91	2.20	6.77	198.29
HAKE													
OCTOPUS		.01	.03	.01	.28	.04	.12	.01	.06		.39		.95
PERCH		.63											.63
SKATE		.07		5.57	1.99	.03		.39	.59	.47	.05		9.16
SQUID													
STURGEON				.01									.01
MISC. SP.										.04			.04
DOGFISH		25.95	3.77	15.67	20.89					17.74	1.88		85.90
REDUCTION	1.12		.81	6.21		3.06		4.92		.61	.14		16.87
ANIMALFOOD													
TOTAL	184.62	243.96	188.07	686.44	554.59	842.47	497.43	370.50	418.78	372.31	204.61	161.47	4725.25
DISCARDS		16.15	12.75	9.07	29.73	27.53	12.09	24.95	14.52	16.33	16.20	2.27	181.59

TABLE 34. 1988 BRITISH COLUMBIA TRAWL LANDINGS (T) OF GROUNDFISH FROM STATISTICAL AREA 8.

	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP	OCT	NOV	DEC	TOTAL
ENGLISH S.	.03	.50		2.82	3.34	5.82	11.79	3.32	11.86	12.65	2.57	.12	54.82
ROCK SOLE	.01			.73	34.34	41.49	60.62	56.86	55.74	10.72	7.78	.13	268.42
PETRALE S.	12.64	1.55		10.19	5.24	16.87	19.51	12.04	12.99	5.88	3.71		100.62
DOVER SOLE	2.73	13.36		13.82	2.26	13.46	9.96	3.66	5.63	9.44	5.69	.95	80.96
REX SOLE									2.87	.25			3.12
BUTTER SOLE													
FLATHEAD S.													
SAND SOLE													
TURBOT		.14		.66		.79	12.69	4.50	22.46	3.42	.23	4.23	49.12
STAR.FLDR													6.18
OTHER FLAT.					.55	3.71	.06	1.62	.24				
PACIFIC COD	3.62	.20		44.48	77.96	317.82	109.72	104.43	239.97	110.70	39.92	.81	1049.63
LINGCOD	1.42	.87	.07	11.83	74.09	198.12	194.29	145.53	77.97	20.75	10.07	2.38	737.39
SABLEFISH	.31	.75		5.23	5.68	5.14	2.66	3.35	2.12	11.39	1.23	.37	38.23
POLLOCK				.13	.61	.65	.12	.05	.31	.01	.23		2.11
OCEAN PERCH	191.47	212.48	47.42	546.02	345.28	197.68	390.81	145.24	109.96	726.16	99.00	6.89	3018.41
BOCACCIO	1.07	.72	1.56	11.32	29.30	91.77	80.55	46.19	28.35	42.18	30.89	24.25	388.15
CANARY RF	3.00	1.25		42.60	43.69	90.57	67.04	56.45	37.99	29.45	27.27	5.78	405.09
REDSTR. RF	4.41	10.84	7.93	26.74	5.48	3.21	14.65	2.25	3.11	31.48	12.40		122.50
ROUGHEYE RF	3.61			9.55	18.62	15.62	25.62	4.95	7.59	46.02	2.37	16.01	149.96
SIL'GRAY RF	27.56	59.40	46.44	109.06	73.52	48.93	68.95	89.98	79.77	94.24	58.17	7.92	763.94
YEL'MOUTH R	30.32	5.09	2.37	80.89	12.28	21.98	123.92	32.80	19.14	15.88	5.32	7.90	357.89
YEL'TAIL RF	.45		.81	370.07	700.31	435.23	149.47	82.09	59.78	58.80	64.38	10.43	1931.82
WIDOW RF				88.88	697.69	338.40	71.17	7.42	6.09	4.55	10.88	5.60	1230.68
OTHER RF	20.60	8.09	40.23	68.90	24.58	51.93	37.43	7.01	43.59	50.88	33.97	9.27	396.48
HAKE													
OCTOPUS	.07			.02	.05	.19	.17	.08	.09	.27	.13	.02	1.09
PERCH													
SKATE	.03	.03	.16	.80	9.75	3.08	.33	2.93	1.13	1.33	.48	.02	20.07
SQUID													
STURGEON													.26
MISC. SP.						.26							
DOGFISH													204.06
REDUCTION	10.22	1.93		9.30	110.82	5.73	18.13	8.66	18.00	15.06	6.21		4.29
ANIMALFOOD			1.49	1.34	.35		1.11						
TOTAL	313.57	317.20	148.48	1455.38	2275.79	1908.45	1470.77	821.41	846.75	1301.51	422.90	103.08	11385.29
DISCARDS	18.82	2.49	26.31	.57	146.88	76.75	78.93	60.56	68.49	1.13	35.33		516.26

TABLE 35. 1988 BRITISH COLUMBIA TRAWL LANDINGS (T) OF GROUNDFISH FROM STATISTICAL AREA 2BE.

	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP	OCT	NOV	DEC	TOTAL
ENGLISH S.	.37	5.19	5.04	4.38	4.26	5.88	3.43	1.51	16.00	9.78	7.34	1.11	64.29
ROCK SOLE	1.28	1.70	11.75	16.71	59.25	7.13	7.74	10.29	25.14	8.30	12.59	.38	162.26
PETRALE S.	.31	1.29	.49	8.70	7.29	21.18	6.98	1.31	3.30	8.33	11.46	1.13	71.77
DOVER SOLE	.01	.02	.29	1.63	1.68	.37	.11	.87	.38	.20	.02		5.58
REX SOLE		.37	.53		.09	.24	.18		.40	.29	1.38	.23	3.71
BUTTER SOLE													
FLATHEAD S.													
SAND SOLE			.04										.04
TURBOT		.02			.02	2.31							2.35
STAR.FLDR													
OTHER FLAT.					.18								.18
PACIFIC COD	143.56	525.55	237.70	398.19	119.82	245.61	115.33	2.91	61.61	35.76	88.24	17.46	1991.74
LINGCOD	2.15	4.01	3.10	7.39	11.84	66.12	24.63	7.62	4.98	6.73	9.33	.42	148.32
SABLEFISH				.13	.32	.31	.06	.02	5.86	.42	.61		7.73
POLLOCK					.01					.47			.48
OCEAN PERCH	7.34	2.76	13.99	174.71	68.71	61.90	74.82		29.38	125.39	51.97	.66	611.63
BOCACCIO	1.17	2.58	.46	4.68	3.32	1.15	4.43		3.24	5.24	2.08	.25	28.60
CANARY RF	1.17		1.72	12.24	2.10	9.21	13.36		1.94	4.17	4.25	3.08	53.24
REDSTR. RF		6.70	1.13	38.38	12.88	9.01	8.95		1.25				78.30
ROUGHEYE RF				.72	.03	.05			.31	6.88	4.46		12.45
SIL'GRAY RF	46.41	40.16	47.36	66.08	41.19	49.62	47.13	6.12	41.92	39.58	34.27	13.55	473.39
YEL'MOUTH R	.97			2.04	4.03	2.28	.25		1.15	1.38	.59	.66	13.35
YEL'TAIL RF	.20	7.40		4.27	4.35	1.22	.41			2.80	3.35	2.92	26.92
WIDOW RF		.12	.93	2.22		.11			3.90		.57		7.85
OTHER RF	1.22	.01	2.35	23.08	4.17	3.70	1.26	15.04	3.21	14.37	1.21	.25	69.87
HAKE													
OCTOPUS	.83	.78	.29	.23	.39	.05			.25	.54	1.28		4.64
PERCH													
SKATE	.16	.41	.56	.04	.31	5.04	7.25	.55					14.32
SQUID													
STURGEON													
MISC. SP.													
DOGFISH				.99	.52								1.51
REDUCTION		19.43		1.60		1.18	7.70	4.69	2.04	.55			37.19
ANIMALFOOD					2.65	1.50	20.71	.34					25.20
TOTAL	207.15	618.50	327.73	768.41	349.41	495.17	344.73	51.27	206.26	271.18	235.00	42.10	3916.91
DISCARDS	2.95	5.08	13.15	67.59	47.85	15.20	3.86	1.13	18.14	4.99		2.27	182.21

TABLE 36. 1988 BRITISH COLUMBIA TRAWL LANDINGS (T) OF GROUNDFISH FROM STATISTICAL AREA 5L.

	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP	OCT	NOV	DEC	TOTAL
ENGLISH S.	.54	1.06	.60	.08	.26	.70		3.09	13.03	1.73	.36		21.45
ROCK SOLE		.08	.22	.23	.91	3.11		5.03	9.58	5.92			25.08
PETRALE S.	.14	.65	.02		.25	1.54		.74	14.66	.80			18.80
DOVER SOLE						.96			.52				1.48
REX SOLE		.20			.29				.41				.90
BUTTER SOLE													
FLATHEAD S.													
SAND SOLE													
TURBOT													
STAR.FLDR									.49				.49
OTHER FLAT.													
PACIFIC COD	33.93	137.25	40.77	35.40	12.75	9.44		14.21	25.12	3.52			312.39
LINGCOD	.26	.40	.22	1.50	.34	2.25		.18	5.55	1.77			12.47
SABLEFISH								.76	.11				.87
POLLOCK													
OCEAN PERCH						12.91	11.15	2.79	.23				27.08
BOCACCIO		.02		.45		1.25	.46	.08					2.26
CANARY RF		.04		.33	.72	1.54	.07	1.20	1.22	6.02			11.14
REDSTR. RF						11.97							11.97
ROUGHEYE RF													
SIL'GRAY RF		.35		3.70	10.82	7.68	.40	7.48	10.43	3.83			44.69
YEL'MOUTH R						.78							.78
YEL'TAIL RF				.09	2.55	3.29	.11		.20	.70	.12		7.06
WIDOW RF											.04		.04
OTHER RF	.12		.06			.17	.68		.08				1.11
HAKE													
OCTOPUS	.03	.14	.02	.19	.05	.02			.22	.37			1.04
PERCH													
SKATE				1.33					.33				1.66
SQUID													
STURGEON													
MISC. SP.													
DOGFISH													
REDUCTION													
ANIMALFOOD									.37				.37
TOTAL	35.02	140.19	41.91	43.30	28.94	57.61	12.87	35.56	82.55	24.66	.52		503.13
DISCARDS	.45		.23		4.08								4.76

TABLE 37. 1988 BRITISH COLUMBIA TRAWL LANDINGS (T) OF GROUNDFISH FROM STATISTICAL AREA 6.

	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP	OCT	NOV	DEC	TOTAL
ENGLISH S.									.09	.33			.42
ROCK SOLE									1.82	.11	.02		1.95
PETRALE S.					.29				.26	.24	.98		1.77
DOVER SOLE					.03		2.77	.05	.60		.91		4.36
REX SOLE													
BUTTER SOLE													
FLATHEAD S.													
SAND SOLE													
TURBOT													
STAR.FLDR													
OTHER FLAT.													
PACIFIC COD								.03	7.02	4.64	.05		11.74
LINGCOD									3.89	1.81	.08		5.78
SABLEFISH							.10		.85		.01		.96
POLLOCK													
OCEAN PERCH					.93		19.26	5.74	25.08	2.26	22.24		75.51
BOCACCIO							.01		1.28	1.55	2.21		5.05
CANARY RF					1.15		6.04		4.66	1.67	1.89		15.41
REDSTR. RF					.74				3.60				4.34
ROUGHEYE RF													
SIL'GRAY RF					1.44		.12	.08	10.25	12.82	8.96		33.67
YEL'MOUTH R									.36		2.17		2.53
YEL'TAIL RF									3.48	2.30			5.78
WIDOW RF													
OTHER RF							.02			.17			.19
HAKE													
OCTOPUS													
PERCH													
SKATE													
SQUID													
STURGEON													
MISC. SP.													
DOGFISH													
REDUCTION									.27	.08	.09		.44
ANIMALFOOD													
TOTAL					4.58		28.32	5.90	63.51	27.98	39.61		169.90
DISCARDS													

TABLE 38. 1988 BRITISH COLUMBIA TRAWL LANDINGS (T) OF GROUNDFISH FROM STATISTICAL AREA 2AE.

	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP	OCT	NOV	DEC	TOTAL
ENGLISH S.													
ROCK SOLE				.49	17.60						.81		18.90
PETRALE S.													
DOVER SOLE													
REX SOLE													
FLATHEAD S.													
SAND SOLE													
TURBOT													
STAR.FLDR					.52								.52
OTHER FLAT.													
PACIFIC COD				1.35	.92								2.27
LINGCOD													
SABLEFISH													
POLLOCK													
OCEAN PERCH													
BOCACCIO													
CANARY RF													
REDSTR. RF													
ROUGHEYE RF													
SIL'GRAY RF													
YEL'MOUTH R													
YEL'TAIL RF													
WIDOW RF													
OTHER RF													
HAKE													
OCTOPUS					.01						.07		.08
PERCH													
SKATE													
SQUID													
STURGEON													
MISC. SP.													
DOGFISH													
REDUCTION													
ANIMALFOOD													
TOTAL				1.84	19.05						.88		21.77
DISCARDS				.05	40.82	5.44							46.31

TABLE 39. 1988 BRITISH COLUMBIA TRAWL LANDINGS (T) OF GROUNDFISH FROM STATISTICAL AREA 1E.

	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP	OCT	NOV	DEC	TOTAL
ENGLISH S.			.27		.31	.02				3.72			4.32
ROCK SOLE	.71	.65	.41		.17	.03							1.97
PETRALE S.										.03			.03
DOVER SOLE										.22			.22
REX SOLE													
BUTTER SOLE													
FLATHEAD S.													
SAND SOLE													
TURBOT					5.47	.60							6.07
STAR.FLDR		.75											.75
OTHER FLAT.													
PACIFIC COD	.10				2.92	.26				12.30			15.58
LINGCOD					4.37	.88				1.41			6.66
SABLEFISH						.01							.01
POLLOCK													
OCEAN PERCH				.41		.23							.64
BOCACCIO		.06											.06
CANARY RF		1.59											1.59
REDSTR. RF						.35							.35
ROUGHEYE RF	.22			1.47									1.69
SIL'GRAY RF						.54							.54
YEL'MOUTH R													
YEL'TAIL RF		.33											.33
WIDOW RF													
OTHER RF	.04				.28								.32
HAKE													
OCTOPUS													
PERCH													
SKATE					.89								.89
SQUID													
STURGEON													
MISC. SP.													
DOGFISH													
REDUCTION						.35							.35
ANIMALFOOD													
TOTAL	1.07	3.38	.68	1.88	14.41	3.27				17.68			42.37
DISCARDS			3.40		5.44					48.54			57.38

TABLE 40. 1988 BRITISH COLUMBIA TRAWL LANDINGS (T) OF GROUNDFISH FROM STATISTICAL AREA 4.

	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP	OCT	NOV	DEC	TOTAL
ENGLISH S.	6.69	62.83	31.39	49.35	39.14	52.78	30.83	81.73	52.70	28.26	11.25	4.49	451.44
ROCK SOLE	1.08	.95	.86	11.72	77.03	229.31	175.45	67.59	113.75	126.06	17.23	8.39	829.42
PETRALE S.	.20	.03	.16	.23	.14	.69	.26	1.61	2.57	1.30	.11	.66	7.96
DOVER SOLE	.08	.16	.04	.74	3.53	52.03	44.76	113.27	108.85	87.84	5.32	2.71	419.33
REX SOLE	.35	1.76	.79	.65	1.05	8.69	7.11	21.34	34.07	26.29	4.40	1.58	108.08
BUTTER SOLE									.92	.04			.96
FLATHEAD S.			.14										.67
SAND SOLE	.53		3.42	9.82	12.25	67.46		.63		1.37		.01	103.90
TURBOT	.14	8.80	.11	1.20	4.24	1.30	1.62	6.93	9.45	9.35	5.20	1.26	46.60
STAR.FLDR	5.57	.37		.02			.04				.03		.53
OTHER FLAT.	.44												
PACIFIC COD	31.00	211.27	36.56	203.59	121.25	255.19	66.23	204.70	204.18	52.94	10.64	1.69	1399.24
LINGCOD	1.12	5.55	1.50	16.80	6.63	24.41	10.79	31.87	22.72	7.14	1.60	3.09	133.22
SABLEFISH				.10	.05	1.77	1.62	2.48	2.30	.29			8.61
POLLOCK	.44	.12								.42		4.50	5.48
OCEAN PERCH				.34	2.66	.08		1.39	.17	.43			5.07
BOCACCIO		.04	.01		.06	.26				.30			.67
CANARY RF					.04	.26	.19	.42	.83	.01		.05	1.80
REDSTR. RF									.43	.15			.58
ROUGHEYE RF				.01									.01
SIL'GRAY RF					.63	.25		.24	.02	.22			1.36
YEL'MOUTH R													
YEL'TAIL RF				40.10	.10	1.83	.36		.94	.19			43.52
WIDOW RF								.13					.13
OTHER RF		.08	.12		1.45	1.62	1.84	1.92	2.25	1.80	.05	.01	11.14
HAKE													
OCTOPUS	.10	.32	.02	.40	.25	.26	.18	.23	.92	1.53	.16	.09	4.46
PERCH													
SKATE	1.29	14.08	4.49	16.79	11.49	15.33	15.21	15.70	19.57	11.02	1.46	.28	126.71
SQUID													
STURGEON													
MISC. SP.						.04	.02						.06
DOGFISH													
REDUCTION						67.43				4.93	.45		72.81
ANIMALFOOD		1.34	3.51	1.56	1.19	14.98	3.11	9.76	4.34	.76			40.55
TOTAL	49.03	307.70	83.12	353.42	283.18	795.97	359.62	561.94	580.98	362.64	57.90	28.81	3824.31
DISCARDS	3.29	20.41	2.04	29.79	50.80	43.32	29.42	39.92	96.06	28.25			343.30

TABLE 41. 1988 BRITISH COLUMBIA TRAWL LANDINGS (T) OF GROUNDFISH FROM STATISTICAL AREA 5U.

	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP	OCT	NOV	DEC	TOTAL
ENGLISH S.	25.51	16.51	24.81	25.02	4.93	3.05	.27	1.12	3.73	29.08	10.84	1.16	146.03
ROCK SOLE	7.34	8.54	27.36	99.44	39.52	70.62	20.13	18.36	7.34	21.71	30.90	7.64	358.90
PETRALE S.	3.75	1.81	3.97	2.35	1.86	2.64		.53		7.77	7.28	1.30	33.26
DOVER SOLE	.65		.02	.31	7.28	.76		36.39	22.92	12.54	15.18		96.05
REX SOLE	.86	1.35	.50	.35	1.03	.03		.40	1.18	1.59	.55	1.83	9.67
BUTTER SOLE													
FLATHEAD S.													
SAND SOLE	.05	.11		1.45	.10	.16							1.87
TURBOT	.46	2.26	1.30		1.94			.10			2.59		8.65
STAR.FLDR			.03		.44	.23		.15					.85
OTHER FLAT.													
PACIFIC COD	286.81	431.58	613.31	569.36	258.83	9.10	.25	3.11	6.73	74.42	53.38	76.85	2383.73
LINGCOD	4.20	1.73	4.55	4.75	3.35	5.30	.47	1.09	.22	5.97	5.69	5.42	42.74
SABLEFISH	.01				.14			2.24	.09	.78	1.04		4.30
POLLOCK		1.02									2.82		3.84
OCEAN PERCH				.02						.11	.19		.32
BOCACCIO	.19	.47	.15	.15	8.04	.24				5.48	2.85		17.57
CANARY RF						.03						.39	.42
REDSTR. RF										.17			.17
ROUGHEYE RF													
SIL'GRAY RF	.16	.04				.03			.48	1.92	.14	4.67	7.44
YEL'MOUTH R				.07							.45		.52
YEL'TAIL RF	.01		.15	.41	2.52					.08	.07	5.03	8.27
WIDOW RF									24.28				24.28
OTHER RF	.07	.04	4.06	5.14	2.16	.36		.46			.49		12.78
HAKE													
OCTOPUS	1.77	2.13	.99	1.51	.62	.13			.18	2.37	1.59	.28	11.57
PERCH													
SKATE	8.92	9.74	4.42	.79	2.78	.53		.10		.57	1.05		28.90
SQUID													
STURGEON													
MISC. SP.													
DOGFISH	.03												.03
REDUCTION						2.71					2.13		4.84
ANIMALFOOD	1.16	.55	.28		.29	4.69	.60	2.41					9.98
TOTAL	341.95	477.88	685.90	711.12	335.83	100.61	21.72	66.46	67.15	164.56	139.23	104.57	3216.98
DISCARDS	.09	14.47	13.70	18.17	55.79	56.70			.45				159.37

TABLE 42. 1988 BRITISH COLUMBIA TRAWL LANDINGS (T) OF GROUNDFISH FROM STATISTICAL AREA 1W.

	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP	OCT	NOV	DEC	TOTAL
ENGLISH S.			3.25			.13	1.07						4.45
ROCK SOLE				.90									.90
PETRALE S.		.47	5.53	3.95	1.00	1.00	1.43						13.38
DOVER SOLE		1.16	21.90	20.56	11.70	11.87	.72				2.36	1.87	72.14
REX SOLE			.33	.53	.89	.76	1.43				.62		4.56
BUTTER SOLE													
FLATHEAD S.													
SAND SOLE													
TURBOT		.02	5.27	2.13	.80		2.86						11.08
STAR.FLDR													
OTHER FLAT.													
PACIFIC COD		.21	1.80	1.43	3.72	5.16					.16	.71	13.19
LINGCOD		.15	1.81	1.09	2.15	6.24	3.94				1.28	.06	16.72
SABLEFISH			24.59	4.93	11.35	4.92	2.15	.07	1.06		13.38	7.53	69.98
POLLOCK		.04											.04
OCEAN PERCH		77.47	216.92	185.73	333.54	75.61	26.35	77.27	11.26	28.90	25.90	19.47	1078.42
BOCACCIO			.07	.18	.95		10.80	.55	2.37		8.68		23.60
CANARY RF			.89	.51	5.78	18.62	2.50	1.56	.58		5.67	.01	36.12
REDSTR. RF			18.16	8.92	41.62	10.71	3.95	2.82	9.63	9.01	8.52	.14	113.48
ROUGHEYE RF		.21	105.22	48.69	86.22	31.91	28.85	.04	27.86	15.14	78.56	41.31	464.01
SIL'GRAY RF		1.93	16.28	28.32	35.01	24.23	13.04	2.50	1.82		6.63	.94	130.70
YEL'MOUTH R		3.91	30.79	4.80	16.80	15.33	6.06	.25	6.67	13.14	4.70		102.45
YEL'TAIL RF					2.90		2.11		1.58		3.59	.01	10.19
WIDOW RF			.21		.53		1.32		1.31		1.76	.25	5.38
OTHER RF		.66	11.82	9.64	15.93	12.64	36.75	4.67	12.99		27.74	15.40	148.24
HAKE													
OCTOPUS						.04							.04
PERCH													
SKATE			.53										.53
SQUID				.19									.19
STURGEON													
MISC. SP.				.11									.11
DOGFISH													
REDUCTION						28.52							28.52
ANIMALFOOD			9.98	6.40	10.65	5.67							32.70
TOTAL		86.23	475.35	329.01	581.54	253.36	145.33	89.73	77.13	66.19	189.55	87.70	2381.12
DISCARDS			3.86	5.90		6.80		12.79			24.95		54.30

TABLE 43. 1988 BRITISH COLUMBIA TRAWL LANDINGS (T) OF GROUNDFISH FROM STATISTICAL AREA 2AW.

	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP	OCT	NOV	DEC	TOTAL
ENGLISH S.													
ROCK SOLE													
PETRALE S.	1.68	5.25	1.93	.36	.49					.13	.98		10.82
DOVER SOLE	18.79	15.21	6.98	1.53	.92					.07	.19	.41	44.10
REX SOLE	.18	.05			2.02					.61			2.86
BUTTER SOLE													
FLATHEAD S.													
SAND SOLE													
TURBOT	2.09	3.43	1.70										7.22
STAR.FLDR													
OTHER FLAT.													
PACIFIC COD	.48	2.93		.07				.04		.21	.03		3.76
LINGCOD	1.54	.51		.03	.03			.05		.67	.02		2.85
SABLEFISH	5.39	13.02	8.76	.02				1.39		4.98	.98		34.54
POLLOCK													
OCEAN PERCH	91.77	80.87	9.18	41.51	44.43	12.15		1.83		41.74	44.92	30.41	398.81
BOCACCIO	12.03	2.32	2.63		.30					.25	1.24	.76	19.53
CANARY RF	3.40	1.93			.44					6.99	2.82	14.74	30.32
REDSTR. RF	25.50	118.19	24.64	4.18	28.19	9.98	21.66	19.45	23.02	133.18	36.33	40.23	484.55
ROUGHEYE RF	73.13	190.80	76.78	1.98	1.74	1.33		.95	.80	2.30	1.15		350.96
SIL'GRAY RF	23.85	36.27	1.75	7.79	10.20	2.04	10.95	1.31	2.68	50.65	40.27	29.97	217.73
YEL'MOUTH R	6.73	37.17	4.87	7.17	46.77	5.99	17.88	20.29	27.84	57.87	29.96	23.06	285.60
YEL'TAIL RF		2.90	2.19		.48						.03		5.60
WIDOW RF	1.16	7.07	2.63			1.16			3.75	1.52	.13	3.85	21.27
OTHER RF	10.98	20.49		1.11	4.56	.64		.16		7.96	.72	13.07	59.69
HAKE													
OCTOPUS													
PERCH													
SKATE	.01												.01
SQUID		.06											.06
STURGEON													
MISC. SP.													
DOGFISH													
REDUCTION					20.18					3.91	35.82		59.91
ANIMALFOOD	5.86	5.10			1.19								12.15
TOTAL	284.57	543.57	144.04	65.75	161.94	33.29	50.49	45.47	58.09	313.04	195.59	156.50	2052.34
DISCARDS	1.36	1.13				.45						9.98	12.92

TABLE 44. 1988 BRITISH COLUMBIA TRAWL LANDINGS (T) OF GROUNDFISH FROM STATISTICAL AREA 2BW.

	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP	OCT	NOV	DEC	TOTAL
ENGLISH S.													
ROCK SOLE													
PETRALE S.				.40							.68	5.12	6.20
DOVER SOLE											.65		.65
REX SOLE													
BUTTER SOLE													
FLATHEAD S.													
SAND SOLE													
TURBOT													
STAR.FLDR													
OTHER FLAT.												2.71	2.71
PACIFIC COD				.05									.05
LINGCOD				.02						.03	.03		.08
SABLEFISH				.27				.07	.29		2.98	2.51	6.12
POLLOCK													
OCEAN PERCH	4.28	28.19		16.09			6.83	16.84	6.88	20.02	174.95	74.90	348.98
BOCACCIO											4.91	.10	5.01
CANARY RF											6.11	6.55	12.66
REDSTR. RF	1.31	3.09									9.61		14.01
ROUGHEYE RF				.07						.90	1.44		2.41
SIL'GRAY RF	1.02	.39		.02				2.25		1.20	22.71		27.59
YEL'MOUTH R								.31	2.45		1.01		3.77
YEL'TAIL RF								.36			.24	.66	1.26
WIDOW RF												.20	.20
OTHER RF	.44	3.09		.23				.46			12.09	4.00	20.31
HAKE													
OCTOPUS													
PERCH													
SKATE													
SQUID													
STURGEON													
MISC. SP.													
DOGFISH													
REDUCTION											16.94		16.94
ANIMALFOOD													
TOTAL	7.05	34.76		17.15			6.83	20.29	9.62	22.15	254.35	96.75	468.95
DISCARDS													0.00

OTHER GROUNDFISH FISHERIES

Groundfish landings in this category are those caught by longline, trap, handline, troll, and incidental to shrimp trawl. In 1988, these landings totalled 11,325 t, 18% above the 1987 total. Sablefish (5,133 t), dogfish (3,515 t), rockfish (1,615 t) and lingcod (941 t) accounted for 99% of the catch by other gear. Catches by main species, gear type and major area are represented in Table 45.

No effort data are available for handline, troll, longline, or incidental to shrimp trawl. The catches for these gears were obtained from British Columbia Commercial Catch Statistics 1988, by Species, Gear, Month, and Area, Fisheries and Oceans, Canada, Pacific Region.

Interviews were conducted with skippers of sablefish trap vessels to obtain catch and effort data. Total trap landings in 1988 were 3,870 t, of which sablefish was the prominent species. The main areas of production were the west coast of the Queen Charlotte Islands (Area 5E), north Queen Charlotte Sound (Area 5B) and the northwest coast of Vancouver Island (Area 3D), accounting for 37%, 27%, and 17%, respectively. Trap landings of groundfish in 1988 by major area, month and species, are presented in Tables 46-50. Ninety-three percent (by weight) of the trap landings were covered by interviews. Table 51 and Figure 5 show the monitored landings, effort and CPUE by major area. A separation of the 1988 trap landings by minor area is given in Table 52.

Table 45. British Columbia landings (t, round weight) of groundfish caught by gear other than trawl in 1988 by major area and species.

Gear and species	Major Area								
	4B	3C	3D	5A	5B	5C	5D	5E	Total
Handline and troll									
Dogfish	1.71	21.16	.27	-	-	tr.	.10	1.55	24.79
Lingcod	76.32	58.66	143.32	30.05	20.90	35.11	89.54	14.50	468.40
Pacific cod	3.82	.13	.01	.30	-	-	.01	.01	4.28
Pacific ocean perch	-	.01	-	-	-	-	-	-	.01
Other rockfish	356.99	56.03	33.73	24.11	69.21	14.62	39.66	1.13	595.48
Sablefish	.01	1.11	-	-	-	-	2.10	-	3.22
Sole	2.51	.01	tr.	-	-	-	-	-	2.52
Misc. species	1.16	.20	1.40	.56	.05	-	.06	.35	3.78
Animal food	-	-	.19	-	-	-	-	-	.19
Incidental to shrimp trawl									
Lingcod	-	5.24	-	-	-	-	-	-	5.24
Pacific cod	.10	.73	-	-	-	-	-	-	.83
Other rockfish	.06	.96	-	-	-	-	-	-	1.02
Sole	.13	-	-	-	-	-	-	-	.13
Misc. species	.01	-	-	-	-	-	-	-	.01
Longline									
Dogfish	823.61	1,882.70	159.28	143.84	113.80	300.28	25.10	41.04	3,489.65
Lingcod	6.61	59.14	98.32	54.24	19.41	94.14	70.77	64.81	467.44
Pacific cod	7.41	2.21	.07	.83	1.92	.14	.10	.04	12.72
Pacific ocean perch	.61	.08	.03	-	-	.01	-	.05	.78
Other rockfish	139.11	110.28	183.74	146.80	59.15	148.40	133.53	83.15	1004.16
Sablefish	4.96	665.92	358.10	5.69	24.58	60.98	73.96	79.42	1273.61
Sole	.16	.16	tr.	.49	.01	-	tr.	-	.82
Misc. species	10.78	6.31	2.16	2.04	1.72	.40	1.30	-	24.71
Animal food	-	-	.34	-	.01	1.67	2.06	.57	4.65
Trap									
Dogfish	-	-	.05	.06	-	-	-	-	.11
Other rockfish	-	2.33	1.57	.66	8.78	-	-	-	13.34
Sablefish[a]	-	473.75	654.40	281.14	1026.11	-	-	1421.15	3856.55
Hagfish	-	66.17	-	-	-	-	-	-	66.17
Total									
Dogfish	825.32	1903.86	159.60	143.90	113.80	300.28	25.20	42.59	3514.55
Lingcod	82.93	123.04	241.64	84.29	40.31	129.25	160.31	79.31	941.08
Pacific cod	11.33	3.07	.08	1.13	1.92	.14	.11	.05	17.83
Pacific ocean perch	.61	.09	.03	-	-	.01	-	.05	.79
Other rockfish	496.16	169.60	219.04	171.57	137.14	163.02	173.19	84.28	1614.00
Sablefish	4.97	1140.78	1012.50	286.83	1050.69	60.98	76.06	1500.57	5133.38
Sole	2.80	.17	tr.	.49	.01	-	tr.	-	3.47
Hagfish	-	66.17	-	-	-	-	-	-	66.17
Misc. species	11.95	6.51	3.56	2.60	1.77	.40	1.36	.35	28.50
Animal food	-	-	.53	-	.01	1.67	2.06	.57	4.84

[a] Sablefish catch data obtained from trip reports and may differ from the Statistics Unit figures.

TABLE 46. 1988 BRITISH COLUMBIA TRAP LANDINGS (T) OF GROUNDFISH - INTERNATIONAL AREA 3C, SOUTHWEST COAST VANCOUVER ISLAND.

	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP	OCT	NOV	DEC	TOTAL
SABLEFISH						229.19	123.19	112.27			9.10		473.75
OTHER ROCKF.						2.33							2.33
DOGFISH													0.00
TOTAL						231.52	123.19	112.27			9.10		476.08

TABLE 47. 1988 BRITISH COLUMBIA TRAP LANDINGS (T) OF GROUNDFISH - INTERNATIONAL AREA 3D, NORTHWEST COAST VANCOUVER ISLAND.

	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP	OCT	NOV	DEC	TOTAL
SABLEFISH			38.65	51.99	101.73	241.70	16.90	165.41	28.91		9.11		654.40
OTHER ROCKF.									1.57				1.57
DOGFISH									.05				.05
TOTAL			38.65	51.99	101.73	241.70	16.90	165.41	30.53		9.11		656.02

TABLE 48. 1988 BRITISH COLUMBIA TRAP LANDINGS (T) OF GROUNDFISH - INTERNATIONAL AREA 5A, SOUTH QUEEN CHARLOTTE SOUND.

	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP	OCT	NOV	DEC	TOTAL
SABLEFISH			13.52	40.22	85.90	57.46	16.65		60.56		6.83		281.14
OTHER ROCKF.									.66				.66
DOGFISH									.06				.06
TOTAL			13.52	40.22	85.90	57.46	16.65		61.28		6.83		281.86

TABLE 49. 1988 BRITISH COLUMBIA TRAP LANDINGS (T) OF GROUNDFISH - INTERNATIONAL AREA 5B, NORTH QUEEN CHARLOTTE SOUND.

	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP	OCT	NOV	DEC	TOTAL
SABLEFISH			274.28		141.46	264.14	57.88		276.97		11.38		1026.11
OTHER ROCKF.						8.75	.03						8.78
DOGFISH													0.00
TOTAL			274.28		141.46	272.89	57.91		276.97		11.38		1034.89

TABLE 50. 1988 BRITISH COLUMBIA TRAP LANDINGS (T) OF GROUNDFISH - INTERNATIONAL AREA 5E WEST COAST QUEEN CHARLOTTE ISLANDS.

	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP	OCT	NOV	DEC	TOTAL
SABLEFISH		71.49	318.77		314.74	329.68	134.72		251.75				1421.15
OTHER ROCKFISH													0.00
DOGFISH													0.00
TOTAL		71.49	318.77		314.74	329.68	134.72		251.75				1421.15

Table 51. Total landings (t), monitored landings (t), and monitored effort (traps) for the British Columbia trap fleet in 1988.

Major area	Total landings (t)	Monitored landings (t)	Monitored effort (traps)	Monitored CPUE (t/trap)
3C	476.08	476.08	33,647	.014
3D	656.02	579.61	37,577	.015
5A	281.86	281.86	20,536	.014
5B	1,034.89	1,034.89	32,940	.031
5E	1,421.15	1,219.08	35,908	.034
Total	3,870.00	3,591.52	160,608	.022

Total trap catch (t) and effort (traps)
by major area in 1988

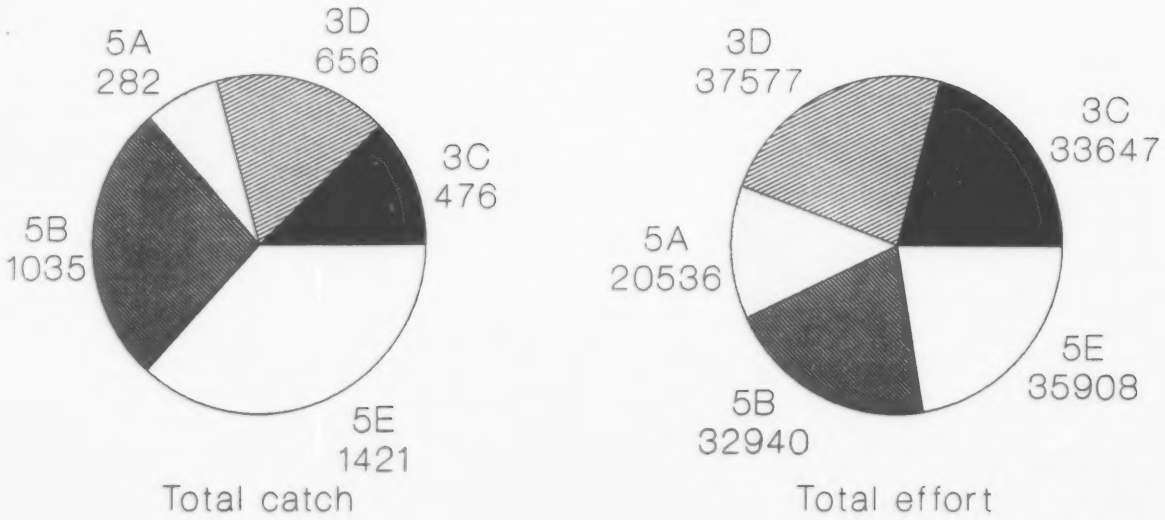


Figure 5.

Table 52. British Columbia trap landings (t) by species and minor area in 1988.

	Minor area					
Species	21	23	24	25	26	27
Dogfish	-	-	-	-	-	.05
Other rockfish	-	-	2.33	-	-	1.57
Sablefish	30.54	371.11	72.10	222.34	89.82	342.24
Total	30.54	371.11	74.43	222.34	89.82	343.86

	Minor area					
Species	11	8	1W	2AW	2BW	Total
Dogfish	.06	-	-	-	-	.11
Other rockfish	.66	8.78	-	-	-	13.34
Sablefish	281.14	1026.11	115.95	691.20	614.00	3856.55
Total	281.86	1034.89	115.95	691.20	614.00	3870.00

JOINT-VENTURE/FOREIGN FISHERIES

Since 1978, Canadian trawlers have participated in joint-venture fisheries. Canadian catcher vessels deliver Pacific hake and incidental species to foreign processing vessels in cooperative fishing arrangements. These fisheries take place off the southwest coast of Vancouver Island (Area 3C). These data are separated from the domestic landings because the joint-venture and foreign catches (converted from processed weight) are reported by the foreign processing vessels and cannot be verified by weight tallies. These data were collated and tallied by the Offshore Division of Fisheries Branch in Vancouver.

In 1988, twenty-two Canadian catcher vessels delivered Pacific hake and incidental species to eighteen processing vessels. A total of 50,182 t of Pacific hake was processed by eleven Polish vessels, six Soviet vessels, and one Japanese vessel.

Other countries have conducted fisheries for Pacific hake off the southwest coast of Vancouver Island for several years. Several of the processing vessels involved in the joint-venture fishery occasionally fish directly (supplemental fishing) when Canadian domestic vessels cannot supply sufficient quantities of Pacific hake. This supplemental catch is added to the national catch.

Fifteen Polish and three Soviet vessels caught 34,982 t of Pacific hake during the national fishery in 1988. Fifteen of the processing vessels caught 4,733 t of Pacific hake during supplemental fishing.

The joint-venture and foreign catches of groundfish for 1988 are presented in Table 53.

Table 53. Joint-venture and foreign catches[a] (t) of groundfish from international Area 3C -- southwest coast of Vancouver Island in 1988.

Nation and species	Joint-venture	National	Supplemental	Total
Poland				
Pacific hake	26,314	23,712	2,673	52,699
Walleye pollock	177	tr.	tr.	177
Pacific ocean perch	tr.	56	3	59
Other rockfish	36	216	44	295
Other species	2	47	tr.	49
USSR				
Pacific hake	22,818	11,270	2,060	36,148
Walleye pollock	50	-	-	50
Pacific ocean perch	2	7	69	78
Other rockfish	67	59	25	151
Other species	35	tr.	tr.	35
Japan				
Pacific hake	1,050	-	-	1,050
Walleye pollock	-	-	-	0
Pacific ocean perch	2	-	-	2
Other rockfish	6	-	-	6
Other species	tr.	-	-	0
Total				
Pacific hake	50,182	34,982	4,733	89,897
Walleye pollock	227	0	0	227
Pacific ocean perch	4	63	72	139
Other rockfish	109	275	68	453
Other species	37	47	tr.	84

[a]Catches (converted from processed weight) are reported by foreign processing vessels and cannot be verified by weight tallies.

CATCHES BY INPFC AREA

This report is also produced to satisfy requirements of committees of the International North Pacific Fisheries Commission (INPFC) (Canada, Japan, and United States). To complement the previous tables, groundfish landings in metric tonnes (t) are presented in Tables 54-56 for trawl and other gears according to INPFC areas. The relationship between these INPFC areas and the major areas used in the first portion of this report is as follows:

INPFC	Major area	Latitude
Charlotte	5A, 5B, 5C, 5D, 5E[a]	50°30'N - 54°30'N
Vancouver	3B, 3C[b], 3D, 4B[c]	47°30'N - 50°30'N

[a] Northernmost 10 miles actually in Southeastern
[b] Southernmost 10 miles actually in Columbia
[c] Inside waters (Strait of Georgia)

Table 54. British Columbia landings[a] (t) of groundfish taken by all types of gear in 1988 by INPFC area.

Species	INPFC area		Total
	Vancouver	Charlotte	
English sole	115.43	763.31	878.74
Rock sole	164.86	1,795.49	1,960.35
Petrale sole	459.41	330.65	790.06
Dover sole	523.19	757.68	1,280.87
Rex sole	10.64	134.62	145.26
Starry flounder	60.29	50.06	110.35
Turbot	71.16	304.01	375.17
Other flatfish	123.77	23.14	146.91
Pacific cod	3,028.88	7,986.12	11,015.00
Lingcod	1,308.78	2,153.38	3,462.16
Sablefish	2,615.70	3,154.32	5,770.02
Pollock	1,097.66	13.57	1,111.23
Hake	6,053.99	-	6,053.99
Pacific ocean perch	800.06	6,128.99	6,929.05
Other rockfish	7,939.82	12,459.52	20,399.34
Misc. species	119.47	233.96	353.43
Dogfish	4,769.77	713.21	5,482.98
Animal food	.53	129.55	130.08
Reduction	138.83	441.93	580.76
Total	29,402.24	37,573.51	66,975.75

[a]Does not include catches from joint-venture or foreign fishery, see Table 53.

Table 55. British Columbia domestic trawl landings (t) of groundfish in 1988 by INPFC area.

Species	INPFC area		Total
	Vancouver	Charlotte	
English sole	115.43	763.31	878.74
Rock sole	164.86	1,795.49	1,960.35
Petrale sole	459.41	330.65	790.06
Dover sole	523.19	757.68	1,280.87
Rex sole	10.64	134.62	145.26
Starry flounder	60.29	50.06	110.35
Turbot	71.16	304.01	375.17
Other flatfish	120.80	22.64	143.44
Pacific cod	3,014.40	7,982.77	10,997.17
Lingcod	861.17	1,659.91	2,521.08
Sablefish	457.45	179.19	636.64
Pollock	1,097.66	13.57	1,111.23
Hake	6,053.99	-	6,053.99
Pacific ocean perch	799.33	6,128.93	6,928.26
Other rockfish	7,055.02	11,730.32	18,785.34
Misc. species	31.28	227.48	258.76
Dogfish	1,880.99	87.44	1,968.43
Animal food	-	125.24	125.24
Reduction	138.83	441.93	580.76
Total	22,915.90	32,735.24	55,651.14

Table 56. British Columbia landings (t) of groundfish caught by gear other than trawl in 1988 by INPFC area.

Gear and species	INPFC area		Total
	Vancouver	Charlotte	
Handline and troll			
Dogfish	23.14	1.65	24.79
Lingcod	278.30	190.10	468.40
Pacific cod	3.96	.32	4.28
Pacific ocean perch	.01	-	.01
Other rockfish	446.75	148.73	595.48
Sablefish	1.12	2.10	3.22
Sole	2.52	-	2.52
Misc. species	2.76	1.02	3.78
Animal food	.19	-	.19
Incidental to shrimp trawl			
Lingcod	5.24	-	5.24
Pacific cod	.83	-	.83
Other rockfish	1.02	-	1.02
Sole	.13	-	.13
Misc. species	.01	-	.01
Longline			
Dogfish	2,865.59	624.06	3,489.65
Lingcod	164.07	303.37	467.44
Pacific cod	9.69	3.03	12.72
Pacific ocean perch	.72	.06	.78
Other rockfish	433.13	571.03	1,004.16
Sablefish	1,028.98	244.63	1,273.61
Sole	.32	.50	.82
Misc. species	19.25	5.46	24.71
Animal food	.34	4.31	4.65
Trap			
Dogfish	.05	.06	.11
Other rockfish	3.90	9.44	13.34
Sablefish	1,128.15	2,728.40	3,856.55
Hagfish	66.17	-	66.17
Total	6,486.34	4,838.27	11,324.61

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